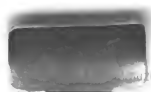


# MOTOR AGE

---







Chittos's notes

Transportation  
Library

71

1

.113

v. 5





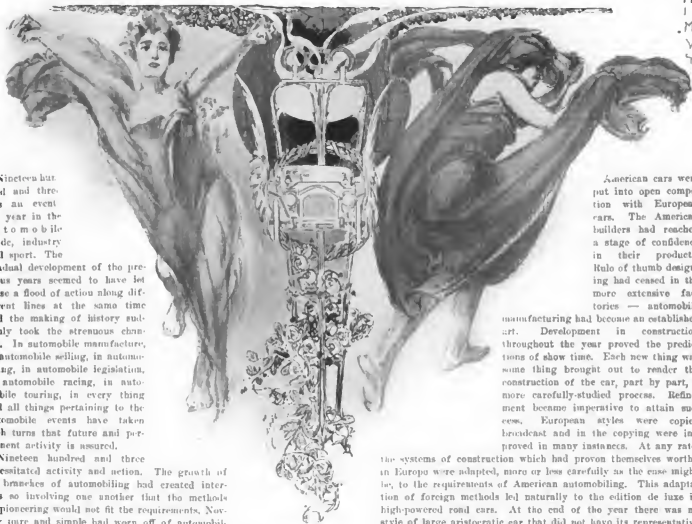
# MOTOR AGE

VOL. V. NO. 1.

JANUARY 7, 1904.

\$2.00 Per Year.

## A YEAR'S ACHIEVEMENT—A YEAR'S PROMISE

Transportation  
LibraryTL  
1  
M8  
V.5  
no.1-20

Nineteen hundred and three was an eventful year in the automobile trade, industry and sport. The gradual development of the previous years seemed to have let loose a flood of action along different lines at the same time and the making of history suddenly took the strenuous channel. In automobile manufacture, in automobile selling, in automobile legislation, in automobile racing, in automobile touring, in every thing and all things pertaining to the automobile events have taken such turns that future and permanent activity is assured.

Nineteen hundred and three necessitated activity and action. The growth of all branches of automobiling had created interests no involving one another that the methods of pioneering would not fit the requirements. Novelty pure and simple had worn off of automobiling. It had become so widespread that definite action was forced to succeed resolution and planning. Automobiling had arrived.

Automobiles were rebuilt for 1903. The shows of last January and February partly conveyed this fact. The shaftless carriage had been passed and the day of the motor car and individually characterized creation had come. The crude principles of construction had reached a stage of development at which form and method might be taken more carefully into consideration and the production of automobiles in commercially large lots became a fact. Runabouts were supplemented by all manner of heavy cars and small and heavy cars took on a style and finished appearance never before possessed. General tendencies in construction spread like wild fire; a few general classes of cars sprang up to succeed the straggling host of freaks.

American cars were put into open competition with European cars. The American builders had reached a stage of confidence in their products. Rule of thumb designing had ceased in the more extensive factories — automobile

manufacturing had become an established art. Development in construction throughout the year proved the predictions of show time. Each new thing was some thing brought out to render the construction of the car, part by part, a more carefully-studied process. Refinement became imperative to attain success. European styles were copied broadcast and in the copying were improved in many instances. At any rate,

the systems of construction which had proven themselves worthy in Europe were adapted, more or less carefully as the case might be, to the requirements of American automobiling. This adaptation of foreign methods led naturally to the edition de luxe in high-powered road cars. At the end of the year there was no style of large aristocratic car that did not have its representative of American manufacture. As power was raised and elegance succeeded plainness in design and finish, weights were cut down and the strong light car was created. Small cars became heavier, but large cars became lighter. In each class makers sought to establish a certain factor of power with a certain factor of safety and comfort.

Nineteen hundred and three was the first year of business vehicles in more than experimental use. Builders who had never before paid attention to this one of the greatest of all branches of automobile building found it possible to adapt their systems of construction to the commercial car. No wonderful business was done in this line. Enough business was done to show that the venture was entirely practical.

Nineteen hundred and three spread automobile agencies, branches, etc., into every city in the United States. Directly or indirectly buying dealers sprang up in localities into which previously automobiles had



come only as the purchases of pioneers who had traveled far to get them or who had ordered by mail. Even in cities and towns of moderate size, large, well equipped stores and garages were established. Automobile selling became just as much a part of a community's business as carriage selling.

Nineteen hundred and three settled the show question on a satisfactory basis. It furnished two great national shows, each taxing the capacity of their respective places of holding and several highly prosperous local shows in smaller trade centers, these shows arranged in most cases by the dealers whose lines were exhibited.

Nineteen hundred and three saw the formation of dealers' associations in all of the large trade centers. Some of these associations quickly assumed roles of usefulness; others, unfortunately, drooped somewhat after the first enthusiasm had gone.

Nineteen hundred and three divided the manufacturing trade. The Association of Licensed Automobile Manufacturers was formed, with the avowed purpose of restricting the manufacture of gasoline automobiles to the ranks of licensees under the Selden patent. The year went out with infringement suits brought against an unlicensed maker, a dealer in unlicensed cars, and an importer of unlicensed cars; 1904 will determine the validity of the patent and the strength of the A. L. A. M.

In the affairs of automobilism generally, 1903 furnished more legislative debate and action than had marked all previous time. State and municipal authorities and automobilists sought, each by their peculiar light, to solve the numerous questions arising from the intermingling of automobiles with other means of transportation upon the common highways. It is probable that nothing final in legislation was accomplished. But the uselessness of restrictive laws was shown on the one side and the worthlessness of too great an independence upon the other. It may be said that during 1903 all sides to the question sought a common ground upon which to co-operate.

Nineteen hundred and three developed the automobile club into a useful body. In many cities old or new clubs took active part in local work or strengthened their organizations for future work. But in national organization the year marked greater efforts than in local clubdom. The American Automobile Association, formed a year previously as a union of clubs, found that individual membership was necessary to its permanent success. It amended its constitution to that effect and started on again along somewhat new lines to build up a great national organization. In the business of attaining a great body of members the American Motor League started ahead of it and during the year worked hard and still harder to increase its membership. With membership it could become a strong factor in automobilism; without membership it was nothing. So the work for membership was carried on so vigorously that it stimulated the A. A. A. to renewed efforts and the dying year beheld the two organizations, rivals in spirit if not by public expression of sentiment. The A. A. A. controls racing; it seeks greater membership and a greater field of influence. The A. M. L. has the greater membership, is working along the lines of touring and other phases of general automobilism.

Nineteen hundred and three had its touch of humor here and there also. Chauffeurs' unions were organized in New York and Chicago and the "boys" promised all sorts of reforms of benefit to themselves and to automobilists.

Nineteen hundred and three established long distance touring as one of

the most attractive forms of automobilism. Extensive elash tours, tours of individuals over all sections of the country, tours to the arctic circle and the crossing of the continent by three automobile parties, and by a motor bicyclist demonstrated the fitness of American cars for rough, hard work.

In formal tests of automobiles there were two national ones during the year—the business vehicle test conducted by the Automobile Club of America and the New York-Pittsburg endurance test, conducted by the National Association of Automobile Manufacturers. Only eleven cars took part in the former, owing to the fact that the N. A. A. M. had refused to recommend participation in it because of the belief that the time was not right for such an affair. It was successful, however, so far as it went, and seven of the starting cars completed the tasks set for them in good shape. The endurance run was most peculiar of all tests of automobilism. Preparations were made for a particularly careful test of the cars under ordinary touring conditions, and then the heavens opened and sent down the greatest downpour of water in the history of New York state. The run became a struggle through a flood, in which thirty-one automobiles fought to win where trains and all other means of transport failed. Twenty-five succeeded and rounded up at Pittsburg, mud covered but little injured by the hardship. It was a crucial point in motor car testing and motor cars were not found wanting.

In automobile sport, track racing was popularized in two scores of cities and half that number of places saw the purely racing automobile in close and exciting competition. Fully 250,000 persons witnessed motor car track racing and two-thirds of this number saw the kind of class A racing which for the season was run at an average speed rate of 1:03 to the mile, 57 miles an hour. The mile track record was broken six times during the summer and finally placed at 54½ seconds.

In racing 1903 also saw the overgrowth of road racing, its development to a point where it became an abnormal and dangerous sport, which in its unrestricted form was brought to a finality in the interdicted Paris-Madrid race. But it also saw the development of the limited Paris-Madrid to a point of international consequence in the realm of general news, the Gordon Bennett cup race in Ireland being the center of the world's eyes last July.

Straightaway racing also secured a hold in America. Courses near or in large cities being practically out of the question, little straightaway racing had ever marked the sport in this country. The discovery of the suitable qualities of the Ormond Daytona beach, in Florida, for such contests resulted in the inauguration of annual speed contests. Preparations are already being made for a series of contests to occur between the New York and Chicago shows and it is probable that world's records will go glimmering.

Taken as a whole the year was a healthy, lively, active one. It spread every branch of automobilism wonderfully and built up the trade to a point where it is prepared to build \$33,155,000 worth of automobiles in a twelvemonth. For a conservative estimate of the probable output of the different factories which will actually place cars on the market during 1904 gives a total of production of 30,000 cars. This production would be divided roughly as follows: Licensed gasoline cars, 16,000; unlicensed gasoline cars, 8,000; electric cars, 3,000; steam cars, 2,000; miscellaneous, 1,000.

## MOTOR AGE—LAST YEAR; THIS YEAR

MOTOR AGE has no radical policy for 1904. It has no change of platform; no great difference in method of procedure to offer. It will make a change here and there as the desirability of that change becomes evident; an improvement whenever that improvement is possible. It expects that before the year is over many changes and many improvements will have been made. All will be made with one definite purpose—to make MOTOR AGE a better paper for the reader of it and hence a better advertising medium for the trade.

There are certain limitations to the publication of a weekly paper which combines news with special articles. These limitations are mechanical and natural. They tend toward one or both of two things—delay in publication or inferior work. MOTOR AGE is making every effort to overreach these limits, and it hopes that during 1904 each issue will mark a step toward the same in the production of a weekly paper of monthly magazine grade.

During 1903 the ordinary limits of production were exceeded in several instances—notably in the cases of the Gordon Bennett cup race and the endurance run—and in rushing the publication of news, the typographical appearance of the paper was kept of even quality with that of other issues. There

was no dumping of matter into odd corners, nor excruciating display in the manner of an afternoon extra. The paper was a unit, with each part related to the others exactly as though there had been no hurry in the publication of the most important news feature.

That such work has been done leads to the conclusion that it can be done to even a greater extent. By this it is not meant that MOTOR AGE will make it the primary aim to take advantage of every opportunity for a "scoop" simply to prove itself enterprising. The intention is, however, to take advantage of every hour in the mechanical part of the paper's production that the most artistically printed paper that can be printed and issued weekly and still contain live news will be the result.

Editorially the subject of policy and improvements broadens, for it takes in the preparation and presentation of special articles, as well as of news. Greater care than ever before is being taken in the preparation of such articles, whether they be of a popular or of a mechanical nature. Like all of the news matter, these will be written for the reader, not solely for the man or thing written about.

MOTOR AGE has established the policy of rigidly separ-



rating its advertising pages from its reading pages. It offers its advertising pages for sale at what is deemed a fair price—their market value. It asks no premium and will take no less. Its reading pages are its own, and their contents are not governed by any advertising contract. If a new vehicle is described, this is done because the reader of the paper wishes to read this description. He wants to understand the construction of the car. Perhaps advertising value results to the maker, but the publication of the description is not primarily to give him extra advertising as a premium on that purchased. This policy will be rigidly maintained and every reader of *MOTOR AGE* may be sure that every line of the reading pages in *MOTOR AGE* is conscientiously written.

In many cases *MOTOR AGE* will go to considerable expense to prepare descriptions of cars or other articles of product of the trade. This is not charged to the maker, in fact or in spirit. It represents one of the legitimate expenses of publishing matter, to read which the subscriber is asked to pay a certain price. *MOTOR AGE* asks only of the trade that it co-operate with it in obtaining the material for such articles. It has found that the makers have come to appreciate the superiority of this method of honest publication of interesting fact over the old style trade journalism in which the exaggerated "jolly" and the so-called "write-up" predominated.

*MOTOR AGE* intends to proceed to the best of its own knowledge of the business, as a straightforward, honest automobile paper, full of high grade reading matter for all classes of persons interested in the automobile trade, sport and pastime. What others may do will not affect its course. If others imitate, let them. If others excel—well, *MOTOR AGE* has hung the old printing office sign "We never sleep," over the door of its every department.

*MOTOR AGE* has during the past year studied every feature of the business closely. It has watched for its own mistakes and has found them. It is profiting by its own experience. Its own growth shows this. It has studied the experience of others and profited thereby. It believes its general method of class paper publication is correct. It seeks continually to improve each specific element in its make-up. Each department is being made a study.

Specifically *MOTOR AGE*, during 1904, among other things will:

Weigh carefully the value of everything that goes into the paper.

Seek to improve the illustration in every respect—mechanical drawings, general illustrations, decorative drawings and half-tone illustrations of mechanical subjects.

Aim to get the best stories about important news happenings and to place as honest news value upon all news.

Establish more, better and more nearly complete descriptions of new cars, etc.

Increase the utility of its department for correspondents.

Make all other departments of a mechanical nature interesting, but accurate in the matter presented—in the endeavor to combine technical truth with plain, simple descriptive language comprehensible to all classes of readers.

Maintain strictly up-to-date and artistic advertisement composition.

Use absolutely the best paper that can be made for rapid printing and binding.

Accomplish absolutely the best printing that can be done in the time at command.

Extend its influence as much as possible. The subscription list of *MOTOR AGE* is growing wonderfully. It will continue to grow. There is no fake about it. There needs to be none. People on all sides are glad to subscribe for *MOTOR AGE*. *MOTOR AGE* simply keeps after them through personal solicitation and by correspondence. Doing this and publishing a paper worthy of subscription is the easiest way to maintain an extensive circulation. It can be done temporarily with a lead pencil; but there is no continued profit in it.

Conclusively *MOTOR AGE* is doing all it knows how to do to establish itself as pre-eminent leader in its field. It has no side enterprises tacked onto its affairs. It represents a business with a single purpose—that purpose to excel in automobile journalism. It is not ashamed of what it has accomplished during 1903, but intends to do more during 1904.

## THE SUCCESSFUL AUTOMOBILE AGENT

Being human, automobile agents do not differ greatly from the average ran of mankind, and since the automobile agency reflects the agent and his peculiarities it is well to deal with the agent himself, notwithstanding that the winst is agencies. In the early days of its career, the Winton Motor Carriage Co. advertised "no agents." Behind this announcement no prejudice lurked. Rather it was merely an indication of the prior, for at that time automobile agents, such as we now know, did not exist. Applications for agencies were plentiful, but the automobile knowledge behind the applications was slight and the Winton Motor Carriage Co. as a self protective measure decided to deal directly with purchasers, feeling confident that better results in operation could thereby be secured. Experience proved the wisdom of that course.

But as this first policy reflected the era of its enforcement, so the change in time brought about a change in policy; and for several years this company has not only not advertised "no agents," but has accepted agency propositions and has endeavored to the limit of its capacity to make the agent successful in his business. The company's aim, however, has not been to appoint many agents so much as to secure good agents. The sale of automobiles is a business of peculiar character, to which an ineluctable injury could readily be done by a poorly equipped and indifferent agent.

The good automobile agent should be not only a good business man in the generally accepted sense of that term but also a student of human nature. The automobile is a mechanical product which, being unable to think for itself, must have someone to think for it. The conclusion readily follows that its conduct in the hands of everybody will not be identical. The variety of its conduct will depend upon the variety of handling it receives; and if the operator is thoughtless enough to mishandle the car in a way that brings him trouble, he is equally liable to blame it all on the car and excuse himself without admonition. Such persons are not few. Every agent encounters them to a greater or less extent. And, unless the agent understands human nature, makes allowances, and gently leads the operator into a proper regard for his car, the operator (either consigns automobiles generally or does business with an agent who extends to him the very aid he needs.

In "The Letters of a Self-Made Merchant to his Son," John Graham said: "What we want is orders. There more orders, etc." What every automobile manufacturer wants is orders and more orders. The successful agent is the one who gets them. He must therefore be enterpris-

By CHARLES B. SHANKS



ing. If he waits for orders to come to him he may be successful for a period, but his day of success is certain to be short. The automobile industry is developing agents who go after the business and these eventually will outdo the men who wait.

Automobiles are usually sold to men of money. Men of money are usually men of more than average intelligence, appearance and taste. The agent must appeal to them. Consequently he should size up to such men's estimates of the successful business man. An agent who can converse intelligently on the events of the day, dress prosperously and be gentlemanly in his conduct, will do the greater volume of business, other things being equal, than the agent deficient in these qualities. And it can even be said that the agent having these qualities stands a better chance of victory selling a car of less merit than does one ignorant, careless and coarse, though he have the better car to sell. After all, the personal influence yields a tremendous influence and doubtless always will.

It is less necessary that an agent know the shortcomings of his competitors' cars than the strong points of his own. Every knock is a boost. The intelligent caller seeks to know what the agent has to sell and why it is worth the buying. Let the agent drift away from the point, to criticize a competitor's car, and forthwith the caller's mind is sent along a channel not leading to a sale. He will not buy A's car because B's car is bad. Nor will he buy A's car unless A shows wherein it is good. The successful agent therefore talks his own goods only and does so with an intimate knowledge that is at once interesting and convincing.

Much of the agent's success depends upon the co-operation that he receives from the house he represents. A good product well advertised, prompt deliveries and a sturdy business policy on the part of the manufacturer are advantages that no agent can fully appreciate until he has enjoyed them. A selling department that refers inquiries promptly to the agent, that gives him as many selling suggestions as he can possibly use to his advantage, and that lends him the benefit of its buoyant enthusiasm are likewise influences that count for the agent's good.

Our own experiences with automobile dealers leads us daily to higher opinion of their worth. They are as a rule men of sound business sense, enthusiasm, enterprise and character, to whom the lessons of experience are proving beneficial. The business is one that attracts the highest order of men and, being so, it is one that promises better returns in future than thus far have been realized.

# The Year 1903



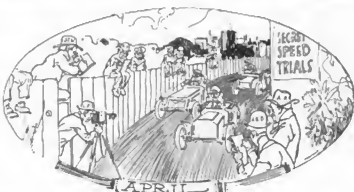
Record breaking show at Madison Square Garden, New York—One hundred and fifty exhibitors; eighty-eight on main floor and in the gallery; thirty-five in the exhibition hall in the basement; seventeen in the restaurant and ten in the first tier boxes.

Manufacturers send a special freight train of exhibits from the New York to the Chicago Show.

Dr. Julian A. Chase, of the Rhode Island Automobile Club, elected president of the American Automobile Association to succeed W. E. Scarritt.

Isaac H. Foster, of New York, elected president of the American Motor League.

Entries for places on the American Gordon Bennett international cup race team closed with five entrants, Alexander Winton, Louis F. Moore, Percy Owen, W. E. Matheson and H. S. Harkness.



Percy Owens and Louis F. Moore selected by the A. C. A. to comprise, with Alexander Winton, the American team in the Gordon Bennett cup race. Preliminary trials almost a fiasco and more or less of a joke because while supposed to be secret were "discovered" by enterprising New York newspaper men.

Count Zborowski, noted sportsman and automobilist, killed in smashup in the La Turbie hill climbing contest, at Nice, France.

Serpellet, with his steam racer, earned chief honors in speed trials at Nice, France.

A Stanley steamer, driven by Frank Durbin, made best time in Boston hill climbing contest.

Pope Mfg. Co. succeeds to all the manufacturing interests of the defunct A. B. C.



One hundred and fifty exhibitors crowd the main hall and annex of the Coliseum during the Chicago automobile show.

Prosperous local shows held at Cleveland and Detroit.

Automobile Club of Great Britain decides upon triangular course in Ireland for the running of the Gordon Bennett cup race.

Milton J. Hudonok, of the Electric Vehicle Co., elected president of the National Association of Automobile Manufacturers.

The big British automobile show held in the Crystal Palace, London—One hundred and forty exhibitors.

National good roads convention under the joint auspices of the National Association of Automobile Manufacturers, the National Good Roads Association and the Chicago Automobile Club held in the Auditorium Chicago.



The Daytona-Ormond beach in Florida inaugurated as an annual racing ground, by a successful 3-day speed tournament.

Handsome set local show held in Horticultural Hall, Philadelphia.

Royalty opens the Berlin, Germany, automobile show with a gorgeous motor car parade.

Symphony Hall, crowded with cars and people during Boston's local show.

National capital completes list of bustling local shows.

New York chauffeurs form a "union," the American Chauffeurs Club.



Governor Odell of New York signed the Bailey bill and the measure so distasteful to motorists and whose passage almost tore the A. C. A. in two became a law.

American Automobile Association adopts an entire new set of racing rules.

Automobile races during carnival week at Los Angeles, Cal., opens the season of sport.

Gabriel wins the Paris-Bordeaux section of the interdicted Paris-Madrid road race—called a holocaust of hades on account of its unfortunate fatalities.

Seven of the eleven starters finish the 2-day business vehicle contest conducted by the Automobile Club of America.

Decoration Day race meets at New York, Boston, Denver and Dayton, O.



American international cup race team calls for Ireland.

Harvey Oldfield with the Ford-Cooper racer puts the mile track record under a minute, making a mile in 50 3/5 seconds at Indianapolis.

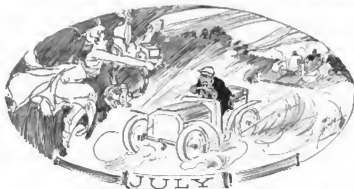
The American Automobile Association amends its constitution to admit individual members.

Chicago dealers organize an association—it was recently advertised for in the lost, strayed or stolen column.

Baron de Crawhorst of a Panhard wins the circuit des Ardennes, in Belgium.

## The Year 1903

# The Year 1903



Jenatry wins the Gordon Bennett International cup race for Germany on a Mercedes—The three members of the French team, De Knyff, Farman and Gairtel, finished respectively second, third and fourth.

Thirty-two started and sixteen finished the 400-mile endurance test of the New York Motor Cycle Club.

G. A. Wyman reaches New York in good shape after having crossed the continent on a motor bicycle.

Records again broken at second New York race meet at Empire City Trotting Club track.

Dr. H. Nelson Jackson finishes his San Francisco-New York transcontinental trip in a Winton car.

The Association of Licensed Automobile Manufacturers formally announces its intention of forcing recognition of the Selden patent.



The Packard transcontinentalists, Messrs. Fitch and Krarup, reach New York, after a trip of great interest and much incident.

One provision of Bailey law declared unconstitutional in a New York city court, and eastern motorists are encouraged to renewed efforts in their fight upon its undesired provisions.

Mr. and Mrs. Charles Gildred, of Boston, cross the arctic circle in an automobile.

Harney Oldfield makes his first appearance as a driver of Winton Bullets in a race meet at Louisville, Ky.

Two-day race meet at Columbus, O., the second meet of the season in the Ohio town.

First automobile track race meet in Europe held at Frankfurt, Germany.



L. L. Whitman, driver of the Oldsmobile transcontinental car, finishes his pinkey trip by running front wheels of his machine into the Atlantic ocean, the rear ones having been wet in the waters of the Pacific at the start.

Great big race meets at Cleveland, Detroit, Syracuse and Providence.

The Patent Title Guarantee Co., of New York and Chicago, announces that it is prepared to defend makers in Selden patent infringement suits brought by the A. L. A. M.

The A. C. A. conducts a successful club run through New England.



The New York-Hillsburg endurance test was run through the greatest flood in the history of New York state and twenty-five of the thirty-one starters reached Hillsburg in good shape and by the specified time; also of these having made every control on time—Moros Aon was the only automobile paper to publish the story of the finish of the week of the run.

Third successful race meet of the season at the Empire City track, and fourth Metropolitan meet held at Brighton Beach track.

A Columbia gasoline car driven by relay of operators makes record day-and-night trip from Chicago to New York in 76 hours.

National Association of Automobile Manufacturers is allotted 50,000 square feet of space for collective exhibit of American automobiles at St. Louis world's fair.

A. L. A. M. enters its first suits against alleged infringers of Selden patent.



Boston Y. M. C. A. opens an automobile school under auspicious conditions—Wide range of instruction offered all classes of persons interested in motoring.

San Francisco and Los Angeles each have 3 day race meets—At the latter Harney Oldfield on the Winton Bullet II breaks the mile track record for the sixth time during the season, placing it at 54.45 seconds.

The fourth annual Thanksgiving day hill climb up historic Eagle Rock hill, under auspices of the Automobile Club of New Jersey, held with great success—The best time up the 3-percent grade mile was 1:36%, made by W. K. Vanderbilt, Jr., with a Moss car.

After a year of preliminary work the New York State Automobile Association is permanently organized.



The Automobile Club of America challenges for the Gordon Bennett cup and accepts entries for position on the team from Peter Cooper Hewitt, Alden Sampson II and the Peerless Motor Car Co.—It is decided that professional drivers may be employed to pilot cars in the race.

German Automobile Club selects an 85-mile course near Homburg, Germany, for the 1904 Gordon Bennett cup race—Accepted by international committee—Will be covered four times—June 17 selected as the date of the race.

# The Year 1903



# MOTOR AGE

Published Every Thursday by  
THE TRADE PRESS CO.  
1303 MICHIGAN AVENUE CHICAGO  
Telephone Calumet 7011

New York Office, 514 West 18th Street.  
London Office, American Publication Bureau,  
35 Manor Park Rd., Hoxton, N. W.

Entered at the Chicago Post Office as Second Class Mail Matter

Subscription, Two Dollars per Year  
Foreign Subscription, Four Dollars

Any Newsdealer may obtain Motor Age through the Western News Co., Chicago, or any of its branches, on a returnable basis

## A LESSON AT GREAT COST

Chicago is a grief stricken city. The undramatic and unparalleled catastrophe which caused her sorrow has been wired to the far corners of the earth.

The burning of the Iroquois theatre has brought the hearts of all men of all races together in a common humanity. There is no need to repeat the news; to retell the story of the frightful tragedy that brought a great city, the whole world, perhaps, to tears.

But Motor Age takes this late thought its first opportunity to extend its sympathy to the city of Chicago and especially to those of its people who suffered directly and most by the unfortunate calamity. It believes that the automobile trade as a whole, which it represents, joins it in so extending to the afflicted the small grain of comfort within its power.

Those who read may grasp the significance of such a disaster. Only those who have seen can fully realize the full measure of horror and of sadness in the scenes of last Wednesday night.

Only to those who were so unfortunate as to witness such scenes enacted; to see the tears stream down the faces of great, strong men injured to all the chances and hardships of life, but nerve broken as they bent over the burden of death they carried from the smoke-enveloped holocaust, is the helplessness of human sympathy truly comprehensible.

There is no reparation for such a tragedy that even stifle the heart sob of the sufferers. There is no justice strong enough to place blame enough, or to punish enough for that blame, to mitigate to the smallest extent the grief of Chicago homes.

In thought for the living only can reparation be made for the dead. The world has been taught a lesson, needed much. It has been given at a frightful cost. It should not be neglected.

It does not apply only to theaters. It affects every avenue of enterprise; every relation of men to one another; the line of industry represented by Motor Age.

The lesson is being felt by the people and executives of Chicago. The future is being reckoned upon. Chicago has awakened to the fact that it has always and forever gambled heavily with fate.

This same tendency to take issue with chance

and to even tempt it, is notable in the automobile trade and sport as in anything else.

The exercise of care for the safety of others as well as of self, becomes for the moment important. When the spur of interest in and excitement over the recent tragedy is past, it should be considered equally as important.

Automobile factories, stores and garages have elements of danger which may be removed or the safeguards raised which may be improved and more closely watched.

Carelessness in such cases may cost lives, just as carelessness killed 600 of Chicago's men, women and children. Even the vehicle operator sometimes holds the lives of others in his hands, and by his care or his carelessness determines fate.

This is truly a time to think!

## AMERICA WILL LEAD FRANCE.

"Although the French people may turn out good automobiles, they can't do it without the use of American machinery, and it just made me swell with pride to go through just made me swell with pride to go through the Panhard, Clement and other factories and see the almost universal use of American automatic machinery. Especially was this the case in the Clement factory."

"My visit was primarily on the sundry problem; there were few things that we require in this country. The French are far behind us in many things and in another year there should be comparatively little importing of sundries. I think this same thing applies to the importing of cars. I predict that this year will be the last of any account for imported automobiles."

"I must say the French are progressive in some things. For instance, the Panhard car racer is ready now for the journey of next June."

"Next year is going to be a year of tops. Everything is fitted with a top of some sort. The tonneau seems to have had its day and instead the makers are lengthening the wheel base of the cars and putting a side door, reached by two steps, for entering the rear part of the vehicle."

Such are the words of an American, Frank Eyckland, returning from abroad. Such an expression can surprise no one, except possibly a Frenchman.

## FARMERS NOT UNFRIENDLY

There has been a mistaken action among a goodly portion of the automobile drivers in

this country that the farmer is extremely antagonistic to the power driven road vehicle. Such is not the case, as recent events indicate.

There have been isolated cases where the farmer has not seen fit to submit to reason and where possibly he was justified in his attack upon the comparatively new vehicle. It is possible, also, that the unreasonableness came from the other side.

The report of the meeting of a farmers' club in New York state shows that while the farmer has had some cause to complain he has taken the situation philosophically and realizes that in time his troubles will end.

He had to pass through the bicycle stage and is now well into the automobile era. He plainly says he has no objection to the automobile, nor to its presence on the public highway; he feels, however, that so long as the roads were created at least for his use before the advent of the automobile, he is entitled to a partial use of them.

He does not wish to be crowded off by ponderous, swiftly moving locomotives, as perhaps he used to crowd the cyclist off in the days of long ago. He realizes and has realized since those days that the road is for no one class; that all have rights which should be respected by others.

He desires only sufficient time for his horses to become accustomed to the snorting, swiftly moving machines, just as they became accustomed to the bicycle, the trolley and other modern means of conveyance. He may sometime have an automobile himself.

Nothing in all this is at all unreasonable; not one sensible motorist will take issue with him, but on the contrary will support all he has said and give him all he desires. More than that, the reasonable and sane man will respect the farmer's hand poised as a signal to stop; he will aid that farmer in teaching his horse that no harm will befall the beast; he will be his friend and he will expect only his rights and civil treatment in return.

The farmer is too quick to realize a good thing to let it go to any extent unreasonable. He is interested in the automobile, as was shown by his aid and friendship and interest in the recent endurance test, and he at least wishes he had one. He will have one some day, and then he will be the strongest ally the automobilist has in the crusade for better roads.

Be reasonable with him; cultivate his acquaintance; stop for him; talk with him; interest him, and you will do more for the cause than you could in any other manner.

## A Reminder That

### THREE YEARS AGO THIS WEEK

The Automobile Club of America decided not to enter a team in the international cup race.

### TWO YEARS AGO THIS WEEK

The Chicago Automobile Club commenced inter-club work, projecting the formation of a national organization of clubs, afterward resulting in the A. A. A.

### ONE YEAR AGO THIS WEEK

The Automobile Club of America set February 1 as the date of closing of entries for places on the Gordon Bennett race team and April 11 as the date of the preliminary trials.

The Illinois legislature convenes next winter, when about half of the present membership will be replaced with new faces. Of all states that are needful of a campaign on good roads this one holds a leading position. The automobile enthusiasts ought at least to have sufficient interest and pride to take steps toward securing the passage of a bill which will make it within the possibility to have a beginning in this direction. There are now enough motorists to start the ball rolling where wheelmen left off, even if the ball has flattened out a little.

After the inventive genius has run himself out on automobile matters what will the patent office do to keep busy?

No well plotted story is now complete without having an automobile in the affair somewhere.

# WILL BE WORLD-FAMOUS FOR SPEED TESTS



Where the Road Will Begin



PETER ABE

Club Men Inspecting the Course



Birdseye View of the Straightaway

Los Angeles, Cal., Jan. 4.—What is destined to be the world's greatest automobile race course is being laid out near this city; on the plain between the southwest side of the city and the Pacific ocean. Where the course begins is about midway between this city and Santa Monica, near what is known as the Palms, a small village. As will be seen in illustrations, the starting point begins on the present highway at the end of a shaded strip of road bordered by full grown pepper trees, which almost meet over head.

The  $7\frac{1}{2}$  miles parallel the new short line, a double track trolley line, which leaves the Santa Monica line near the starting point of the new boulevard, and runs direct across the great La Ballona Rancho to Playa Del Rey.

There is less than 15 feet fall in the whole distance, and on the mile and kilometer stretches, which will be marked for the purpose of speed tests, there will be a fall of less than a foot in the whole mile. The mile will contain the kilometer and will be about midway of the  $7\frac{1}{2}$  miles, which will give 3 miles to start in and 3 miles to slow up after making the fast mile. This course being parallel to a mile-a-minute trolley road bed will make it possible to watch races from trolley cars, and will thus be susceptible for a moving grandstand plan of racing, with races run faster than was ever dreamed of before. The course is to be 100 feet wide.

The surveys and profiles have already been made, and over three-quarters of the right of way already secured; the only delay now necessary before beginning work is in closing the sale of several small pieces on the inland end of the  $7\frac{1}{2}$  miles. The first work will be the simple grading for the surface, and the surface will be of California's famous rotten rock, which surface material will be delivered along the boulevard by trolley cars. The railroad people already have the material out and have arranged to deliver it on the grounds to the Automobile Club of Southern California, which has charge of the work of building this boulevard. The first road bed will only be 30 feet wide, and this will be increased during the year to 100 feet, for next winter's racing.

The money for this splendid straightaway will be contributed, enough having already been obtained from the recent automobile races to build the original 30 feet drive-way. As the whole  $7\frac{1}{2}$  miles will be over private right of way controlled by the automobile club it will be kept up like a cycle path and only automobiles, motor bicycles and bicycles will be allowed upon it, and the Automobile Club of Southern California will reserve the right

to close the boulevard on certain occasions for automobile races.

It is quite probable that the expense of keeping the boulevard in perfect shape will be arranged for by charging a fixed annual fee to all automobile owners who wish to use this boulevard, as is done with cycle paths.

There is but one road crossing in the whole distance, and that could be closed on occasions when desired. The prime object of this boulevard will be to make an ideal automobile road from this city to the Pacific ocean by the shortest and straightest route. Along the ocean a boulevard is being built to connect all the principal resorts and the splendid automobile straightway will strike this ocean front boulevard at Playa Del Rey; thus automobile owners can go to their beach homes and summer cottages with their own automobiles as quickly as they could go from their office to their various homes in the city.

It was announced when the automobile races were being promoted here in November that the total proceeds would go towards building good roads, and the Automobile Club of Southern California thought it best to build one piece of continuous good road instead of scattering their money in patch work on present highways.

Here and there about Los Angeles, there are stretches of perfect roads, but like most other parts of the country, there is no continuous piece of good road that will permit automobiles being run at top speed for miles, and so Chairman Frank A. Garbutt, who is the leading racing spirit of the Automobile Club of Southern California, picked out the above described straight-away course between the Palms and Playa Del Rey, and secured 3 miles of the right of way before bringing it before the rest of the club.

Later in November the board of governors of the automobile club, members of the Los Angeles Automobile Club, as well as many of the members of the Automobile Club of Southern

California, were taken over the route with Superintendent Clark of the Los Angeles-Pacific Railway Co., and survey and estimates were thoroughly examined. Early in December the board of governors of the A. C. of S. C. considered carefully the proposition and voted to raise all the funds necessary to complete the straightway in addition to the sum of \$7,000 it already had set aside for this work.

The total cost of the  $7\frac{1}{2}$  miles will probably be about \$30,000, and the boulevard will be fenced in, and closed at both ends substantially with gates, so that it can be closed when necessary and the gate-keepers and caretakers will be sworn in as deputy sheriffs so that horse drivers or those not entitled to use the boulevard can be arrested if they attempt to drive upon it.

Washington street, one of the principal thoroughfares of this city, runs in its extension within a half mile of the inland end of the new boulevard. Adams street, the most aristocratic avenue in Los Angeles, debouches into Washington street in less than two miles from the beginning of the boulevard. Pico street, another city thoroughfare, which runs miles out into the Cahuenga valley, can also be used to reach the new boulevard. These three wide avenues will give ready access from the city to the splendid straightway and are now used to reach Santa Monica, which is the oldest and best known resort on the South Pacific coast, and is only 4 miles north of Playa Del Rey.

## IN ITS NEW CLUB HOUSE

Boston, Jan. 4.—Work on the new club house of the Massachusetts Automobile Club is to be started this week, and will be rushed along until it is completed. The new structure, which is to adjoin the present quarters, will have a frontage on Boylston street of 87 feet, with 100 feet depth, and when completed will be one of the best automobile club houses in the country. The building will be of brick, with terra cotta trimmings, the front being of mottled gray to the second floor, and above that dark red, laid Flemish bond. Besides affording spacious accommodations for the club members, room is provided for the storage of over 200 automobiles. The first floor will contain storage room, a ladies' room to the left of the entrance, and the superintendent's room to the right. At the rear is to be a large washstand, and adjoining this is the elevator, running from the basement to the upper floor. The second floor is principally for storage, but contains also a chauffeurs' room, with lockers and toilet, and washstands for machines.

# MOTOR CYCLES IN FRANCE

**Paris Show Exhibits Far Behind Those in England, But Intense Interest Is Shown—Makers Optimistic Over the Business and Believe It Will Equal the Automobile Trade**

Paris, France, Dec. 18.—While the automobile is of course the star attraction at the show, there are a great number of motor cycle riders who consider that division of the exhibit of almost equal importance, and the motor cycle stands are receiving their due share of attention. The display here does not equal those at the recent shows in London, because the French have not taken as active an interest in motor cycling as the British, but nevertheless the exhibit by the French makers is a most creditable one.

For a time the motor cycle was almost forgotten in France, but it has again sprung into favor on a greater scale than ever before. This revival is due principally to the many motor cycle races, consumption tests, hill climbing competitions, record trials, and the recent endurance trials which aroused interest and enthusiasm throughout France. That the motor cycle manufacturers are determined to keep up this interest is evidenced by the remark of a maker this week who said: "We are not going to drop the interest, and feel confident that the motor cycle industry in France will soon not only equal that of England, where it is at present in high favor, but on account of our better roads we will become the leaders, just as we now are in the automobile field."

There are no striking novelties in the French machines, about the only feature noticeable being that nearly all the manufacturers have evidently come to the conclusion that the right place for the motor is on the lower fork of the frame in front of the gear. Only one or two makers vary from this position.

Another noticeable feature is that almost all of the motor cycles, with the exception of the racing and freak machines, have either a 2-horsepower or 2½-horsepower motor. These machines develop from 28 to 35 miles an hour, which the manufacturers claim is sufficient for ordinary touring. Quite a number of the machines are water-cooled, and this method seems to be growing in favor.

Some of the main features of the different French machines are as follows:

**GIMFON**—One of the machines on exhibition at this stand has a two-cycle motor of 3 horsepower, the gas being compressed in the crank chamber. This type of engine bids fair to become popular because of the suppression of working parts and the increased power obtained with less weight. The standard patterns with four-cycle engines have a double front fork, also with a new spring fork, the coil springs being placed in the round tubes above the fork crown. The two-cylinder machine has a Lougheureux carburetor between the two inclined cylinders, and when equipped for touring is fitted with a large tank and one coil instead of two.

**GORRON-MINERVA**—The frame on this machine is lower than on other motor cycles, making it a comparatively easy matter to mount and dismount. The motor is suspended by two strong tubes which are fitted to the lower frame bar. The cylinder and the body are cast iron and made in one piece. The motor is 2½ horsepower, the valves are me-

chanically operated and both brakes are on the rear wheel, one on the hub and the other on the rim.

**MOTO-CARDAN**—There is a direct drive by means of the propeller shaft with universal joints, similar to the transmission on a car. The motor is arranged across the plane of the machine. The mudguard equipment is better than most French machines.

**HERTLE-BURNEAU**—This firm presents a novelty in a little 1-horsepower machine which is probably the lightest motor cycle ever designed, the weight complete being 48 pounds.



The Griffon



The Peugeot

The cylinder is of pressed steel, the head being given a pointed form, with the top bored to receive the inlet valve. The exhaust valve is fitted to one side and the plug is opposite. The exhaust valve is opened by a small arm actuated by a Bowden cable. There is no muffler and the exhaust escapes directly into the air. Belt transmission is used.

**WERNER**—There are several improvements in the 1904 model. The combustion and valve chambers are cast in one piece, with an air space between, and radiating flanges encircle the valves. The carburetor is in the tank and is hidden from view by a door. A free engine is obtained by expanding the flanges of the engine pulley to enable the V belt to slip on a free running ring. The bracket spindle is divided so that both cranks can hang down together. When the left pedal is released the bracket brings it back to its normal position for pedaling. The inlet valve is mechanically operated, and there is a system of regulating the speed automatically when the free engine clutch is thrown out. An electrical device causes the spark to short circuit every other revolution, instead of jumping the plug. The compression tap allows a cer-



The Gobron-Minerva

tain amount of air to be drawn into the cylinder at high speed and assists in giving a perfect mixture and a cooler engine. The exhaust tube is now nearly straight from the engine.

**PEUGEOT**—Three varieties of Peugeot motor cycles are shown—belt-driven, chain-driven and gear-driven. The firm recommends the belt as being the most satisfactory and simplest. The gear driven is by means of a bevel gear direct to the rear hub. The engine is 2½ horsepower and the Simms-Boach are magneto is used. The magneto machine is attached behind the engine and close to the seat tube, and the transmission being by a ½-inch pitch chain. The woman's model has an elastic fork. Both brakes are applied by Bowden levers and cables.

**GROSSE CORMATIN**—This is a new machine which has several points of interest. The engine is 2 horsepower, fitted in a slightly inclined position, the main down tube curving under the crank chamber. Above the engine is a double top rail, the lower of the two tubes being slightly curved upward and forward to give clearance to the engine. The lady's model has a single top rail from the top socket lug to a point about 7 inches above the bottom bracket. The transmission is by a flat rubber covered canvas belt. The brake is of the back-pedaling variety.

## WILL WAGE WAR ON FOREIGNERS

Importers of foreign cars who are identified with the Association of Licensed Automobile Manufacturers are preparing to wage a vigorous warfare on foreigners who may attempt to visit America around show time to sell machines. E. B. Gallaher, who handles the Georges Richard-Brasier, says that particular attention would be given to Messrs. Charley and Fournier who, in past years, have come to this country, disposed of a few machines and then returned to France.

Now that importers as well as domestic manufacturers have joined the licensed association the former believe they should protect themselves from the invasion of foreign agents who may simply come here while there is a demand for cars.

## CHAMBERLIN GOES TO EUROPE

W. H. Chamberlin, attorney for the Patent Title Guarantee Co., sailed December 30 for Europe on the Cedric. It was learned at his office in the Marquette building, Chicago, that he would visit London, Paris and Berlin, returning to America in about 90 days. Beyond the fact that it was a "business trip" nothing could be learned of his intentions while abroad. Alan C. Durbin, manager of the company, also claimed to know nothing of the nature of Mr. Chamberlin's visit abroad. "There is absolutely nothing doing now in regard to the Selden patent," said Mr. Durbin, "and there will be no news until after the show. Perhaps we may be able to give you something then. Meanwhile I have nothing to say."



The Werner

# GROWTH OF AUTOMOBILE BOATING

Ever since the day of the small power boat, commonly termed a launch, there has been something of the spirit of rivalry among owners, but it remained for the year just ended to develop speed boating into what might be called a sport, and the advent of the automobile and of the speed boat coming so closely together, it is not natural that to the former should be extended the credit for the latter to at least a large extent.

Long before such a thing as a launch fitted with an explosive engine had been heard of there had been small power boats, so that this term as applied to launches or speed boats is something of a misnomer if it is intended to distinguish small from large craft operated by power other than the breath of heaven. The launch is not new, it was used many years ago, but its power was steam and it was a clumsy affair and generally considered a business proposition rather than something for the pleasure seeker; in fact, a launch was little known outside of the navy, all other boats being operated with steam being known as "steamers" or "steambots." The launch as a purely pleasure proposition came with the small explosive motor and it is not blessed with a history of much over a dozen years.

The first explosive motors to be used in boats were not much different from the two-cycle type of today, though of course crude and generally unreliable, chiefly due to a lack of knowledge regarding the properties of gasoline and ignition. The principles of engine construction have changed little, and there is in operation today many an engine made over a decade ago, but having since probably undergone improvements in the matter of ignition.

The hot tube was the first form of ignition, and while used by some today, it proved unsuccessful because of the liability of being snuffed out in a strong wind. Along with this form of ignition was the old fashioned surface carburetor, and when one part of a motor would work it was doubtful if it would be supported by another vital one to the extent of proving the machine at all reliable. Generally it did about as it pleased, and never pleased unless nobody cared; then it would work with perfect satisfaction.

It had been proved that a more simple form of carburetor was necessary, and makers generally turned their attention toward this one thing. They had noticed that in starting a gasoline engine it was found necessary to prime it, and the argument naturally was that some form of more direct feed was the correct principle, with the result that what is now commonly termed the generator or vaporizer is almost universally used on the two and some of the four-cycle type of motors, the float feed not having as yet proved most satisfactory for the two-cycle motor.

Up to and including the year just past a very large percentage of the makers of small power boats, and their number has grown wonderfully in the past 10 years, had come to use the primary circuit and make-and-break apparatus for ignition, and some form of a generator or ionizer for a carburetor, with generally satisfactory results except possibly in the matter of economy and where a high speed motor was used.

The cry for speed came, and with it the demand for a motor that would turn up faster,

with the result that the jump spark is now being not only taken up by many of the makers, but it is almost universally used where extreme speed of a motor is demanded. Thus in the matter of ignition the power boat is rapidly following in the footsteps of the automobile. It had been almost proved that a float feed carburetor would not successfully work under all conditions in a boat, but this has been shown to be an error and the later types of motors put out by marine engine builders are fitted with automobile carburetors.

## 續

Outside of the question of carburetors and ignition, the boat engine builders are appropriating many of the smaller devices to be found upon automobiles, such as governors, controlling devices, spark leads, etc.

Up to a year or two ago the ordinary overhanging stern type of launch was about all that could be found, and although a number of this style had been built with fair results, this form was recognized as being incapable of great speed possibilities, owing to the fact that when under way the stern would settle and force the craft off its natural water line. Then came the flat, torpedo model with consequent bettering of results. Today the models are undergoing such changes that it is with difficulty one may keep abreast of the times. The most modern speed boats have retained much of the flat lines aft but have been made narrower forward, the motor is placed almost amidship—in many cases of best results at the forward end of the cockpit—and the boat is kept pretty well on its natural lines. The argument that this type of boat would not prove so good a sea boat has been quickly and effectively exploded.

America had seemingly little time to enter into the matter of speed boats or was satisfied with an ordinary going craft with plenty of room and comfort, but the reports from abroad of the work of the Napier and Mercedes seemed to stimulate the speed merchants, with the result that within a few months a number of boats were put out which were capable of going anywhere from 10 to 20 miles an hour and with reports of even better results.

The French people were the first to take up what is now termed automobile boating, and the Seine is in season pretty well dotted with these craft. Races for both speed and endurance have been numerous the past year, and a large number have been scheduled for the coming season. France, England, Germany and Italy have been caught with the fever, so that now almost every maker of automobiles is having order placed on his books for either complete boats or the machinery part.

The Americans are not far behind, if at all; they are going in for speed and it is safe to assume that they will get it at no distant date.

## 續

The little cockleshells of boats are fitted with two, four and even eight-cylinder automobile motors of capacity from 10 to 100-horsepower, and it would be strange if speed were not a result of such scheming.

America really has had no power boat races. There have been brushes between individuals, and at Detroit, Providence and New York there have been events which have been called races which, however, were only worthy the name short cruises. Abroad the French have

such an affair frequently nowadays, and it is for the sole purpose of gaining in matter of speed. The first event of any great importance was the Harmsworth cup race, run on the Thames immediately after the Gordon Bennett race of last year, July 11, and which was won by S. F. Edge. This result started a letter and newspaper discussion between S. F. Edge who operated a Napier and M. Charley, the owner of a Mercedes, with the result that another season will see these fast boats pitted against each other more than once, and it may be possible that they will be seen in this country as well. At the same time it must be borne in mind that other makers are now at

work with a determination to have something to say in the matter of speed of boats.

Already there are races scheduled to take place between the owners of fast boats in this country and a number of clubs will also conduct such affairs. There is a possibility, also, that the management of the St. Louis fair will either arrange some power boat races or at least make an appropriation for such and turn the work and details over to some committee of more interested persons. At any rate, there is a very good prospect that there will be such a surplus of power boat races that the American makers will not feel like lagging back and permit the visitors from abroad to take all the honor in this line.

The more prominent American boat builders will build something in the speed line, and because of the natural rivalry that exists it is pretty safe to assert that this country will be well to the front before 1904 closes.

## ASSURED OF SUCCESS

New York, Jan. 4.—Among those concerns which have already secured shares for the Herald Square national motor boat show are: Standard Motor Co., Fairfield Motor Co., Isham Motor Co., New York Gas Engine and Power Co., Hasbrouck Motor Works, Palmer Bros., Cushman Motor Co., Reliance Kerosene Engine Co., Fairbanks, Morse & Co., Yacht Gas Engine and Launch Co., Camden-Anchorage Co., Whitestone Hollow Spar and Launch Co., Clifton Motor Co., Truscott Boat Mfg. Co., Richardson Engineering Co., Carley Life Boat Co., George Crouse Cook, United States Long Distance Automobile Co., Julian P. Dennison, Marblehead Yacht Yard, J. H. Perrine, Pierce Engine Co.

Hollander & Tangemann have been unable to clinch the automobile boat match which they have been trying to arrange with Smith & Mabley. All the details have been agreed upon but it now appears that Smith & Mabley have a possible purchaser for their boat, the Vingt-et-Un, who may object to its being raced. Hollander & Tangemann declare their \$1,000 offer stands for a race with any automobile boat.

In response to the requests of boat owners, it is understood that the Automobile Club of America will soon offer a set of rules for automobile boat racing. Many believe the conduct of this growing sport should be in the charge of those who have so earnestly supervised the racing of automobiles.

The Iroquois theater catastrophe claimed for one of its hundreds of victims Donald Wells, son of S. P. Wells, Jr., of Chicago, both of whom were enthusiastic power boat operators at their summer home.

## GREAT GOING ON THE BEACH

**Packard Gray Wolf and Stevens-Duryea Machines Attack Records and Make Remarkable Showing, Indicating that America Will Soon Hold Most of the World's Records**

Daytona, Fla., Jan. 5.—The Ormond-Daytona beach sustained its reputation as the fastest automobile speed course in America the past few days, and those of the visiting automobilists who made their headquarters at The Inn at Ormond leave with unqualified satisfaction, both as to their speed trials and kind treatment at the hands of the Ormond-Daytona people. It was not generally known that there would be attempts made on the records the past week, but a few New Yorkers were in the "know." It had been arranged that the Packard Gray Wolf should be turned loose, so it went after the record bono in good style and she only demonstrated what her designers and friends claimed for her. The J. Stevens Arm & Tool Co., of Chicopee Falls, Mass., also possess an alert sales manager in the person of C. C. Hildebrand, who had a scheme to offer for some record breaking. The Gray Wolf landed here 3 days after the arrival of the party, after a small fortune had to be expended in telegraphing to try and locate it.

The Stevens-Duryea racer arrived Wednesday morning, and Mr. Hildebrand and J. Frank Duryea were anxious to see Nestman try and get some records to close up the old year. The machine was soon in readiness, also the 15 miles of telegraph and telephone wire. The little Chicopee Falls production was first sent after the mile record for machines of 1,000 pounds and under, of 1:06½, made on the beach last March by the Oldsmobile Pirate. The telephone from the end of the mile announced that the record had gone. New figures of :58½ had taken its place; several times again did Nestman tackle the enemy and finally got down to :57½, which he thought was the best that could be done with the gear he was using. He next went after the 5 miles and made 4:57½.

Charles Schmidt, the Gray Wolf driver, had the Packard in shape for a mile trial. The beach record was :52½, made by Winton. When Schmidt received the signal to go he was traveling fairly fast, but it was seen

that he was not getting all out of the 24-horsepower Packard. The clock gave the time :54½, which did not satisfy Waldon and Schmidt. The next day he drove the Packard five individual miles, every one of them being below those of the first day; two of them being :50½.

The Packard was next sent after the 5-mile record. When the time, 4:21½, was announced the fairly large number of spectators gave the Florida Indian yell.

Satisfaction came in large chunks Sunday morning, the day following, January 3. J. F. Hathaway, a confirmed believer in the

clock showed :46½, or three fractions from the world's record.

The least kilometer distance accomplished yesterday by the Packard was :31½, but Sunday the clock showed two of them at :29½ and :29½.

Yesterday the Packard was again brought out for a try on the beach, and the mile record was attacked five distinct times, the times being :46½, :47, :46½, :47, :46½, while the two kilometer trials brought :29½ and :29½.

The times developed this week are already the fastest ever made in America and only indicate that it is at least a possibility that before the meet is over this country will hold world's records.

The mile in :46½ is but the two fractions away from the world's record of :46 for heavy cars, while the kilometer record of :29½ equals that made by Haras with a voiture legere.

Joseph Tracy will drive the 1903 Peerless racer in the Florida tournament. It is not unlikely that a match for the meeting will be arranged between W. G. Brokaw's Renault racer, to be driven by Bernin, and R. M. Shanley, Jr.'s 40-horsepower Deauville.

Sidney B. Bonham, of New York, says that Domnick Lamherjack has sailed on the Deutschland to visit the New York show. He brings with him a 60-horsepower Clement, with which he will try to lower some straightaway records on the roads in the vicinity of New York. The trials will be made in private if special permission cannot be obtained for racing on the road. He may also enter the Florida automobile tournament.



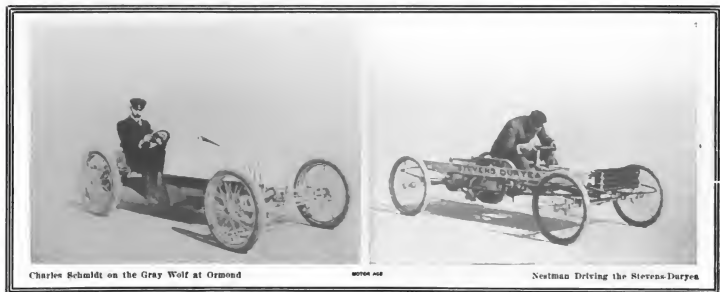
### COOPER AND OLDFIELD AGAIN

Cleveland, O., Jan. 5.—Barney Oldfield and Tom Cooper may tie up again. The record breaker has been in Detroit and made a contract with the former cycle champion to manage him next season. A local story has it that Oldfield and Cooper propose to open an automobile store in New York.

"There is no truth in that," said Charles B. Shanks, of the Winton company, over the 'phone to-day. "Barney and Tom have it in their heads that they would like to go into business together in some eastern city. We would not permit Oldfield to open an opposition Winton agency in New York and, of course, he must not be identified with any other machine

beach, wanted the Packard people to try a mile with a favorable breeze blowing, and the breeze came as if made to order, as a stiff norther came up. Sunday morning, when the tide was almost out and the beach fairly dry, driver Schmidt unlimbered the Packard and the machine with the brute name was once more sent after the mile record. This time it was thought that the world's record was within reach, that made in France this year of :46.

The first trial showed :46½; the next trial showed :47 flat. Again Schmidt headed for the starting point and it was seen that he was going to do something desperate. The



Charles Schmidt on the Gray Wolf at Ormond

MOTOR AGE

Nestman Driving the Stevens-Duryea



during his present contract with us, which does not expire until next August. If the new partnership pans out there is a chance that they will go into the retail trade in the east. That is all there is to it."

Later in the evening a Motor Age man had a talk with Oldfield at the Hollenden.

"I do not intend to embark in the retail venture with Cooper until after the conclusion of my contract with the Winston people," said he. "In 1905, though, Tom and I will have the biggest and finest automobile establishment in New York. This racing is a risky business and if I pull through next season I hope to do so with enough money to insure

## PLACE FOR VANDERBILT

### Millionaire May Be on the A. A. A. Racing Board—Newspaper Men Desire Recognition

New York, Jan. 4.—To a Motor Age representative it was said last week by one in authority that W. K. Vanderbilt, Jr., had been approached regarding a position on the racing board of the American Automobile Association and had expressed his willingness to serve if selected. Those interested in racing matters will hold a meeting this week to dis-

mittee in charge of the affair, says it will be the most important gathering of automobilists and good roads advocates ever held in America.

The Automobile Club of America's holiday smoker was a huge success. About 150 members and friends filled the clubrooms, smoked the long Dutch pipes and enjoyed the feast of talent provided by Emerson Brooks, chairman of the entertainment committee. Supper was served at 11 o'clock.

Apprenticeship of the estate left by Elliott Morris Zborowski, known also as Count Zborowski, who was killed in an automobile race at Nice last April, shows him to have been



Upper View—Daytona End of Beach

MOTOR AGE

Lower View—Ormond End of Beach

my being well fixed for the rest of my life, though, with my capital invested in a legitimate business which will not necessitate risking my neck on the track.

"I am not prepared to say whether I will go to the Florida meet for the mile record. Racing is a business with me and I must figure on what my expenses would be. I am sure, though, I can beat 46 seconds."

### CLEVELAND CLUB HAS A HOME

Cleveland, O., Jan. 4.—The Cleveland Automobile Club, which now numbers in its membership about a hundred owners of automobiles, opened club rooms in the Hollenden hotel on New Year's day.

Lately the officers decided that in order to give its members some tangible benefit the club feature should be established, and the result of this decision was the opening yesterday of a permanent automobile headquarters in the Hollenden, on the grill room floor and just west of the grill room. Two large rooms have been thoroughly refitted, and will be open to members of the club and touring members of the National Association from 11 o'clock each morning until late in the evening.

The rooms will be open to the members for dinner parties, and automobile literature will be on file. A series of smokers will be inaugurated at once, and it is expected that the club will soon number many more members than at present.

cuss changes in the racing rules. A. R. Pardington, chairman of the racing board, has asked for suggestions from owners of fast cars, from racing men and from meet promoters. Secretary Gillette says the new A. A. A. book will be ready next week. It will contain the present records and a list of sanctions granted during 1904.

The appointment of the racing committee of the A. A. A. has, it is said, caused considerable friction between two daily newspaper men of the city. Both, it is declared, are candidates for positions on the committee, notwithstanding that the A. A. A. officials have declared their intention of appointing men of wide reputations. One of the candidates declares that his opponent's experience of racing is confined to managing bicycle riders and the other retorts that his opponent's knowledge of racing matters is equal to his ideas of an automobile motor, having recently described a steering box being geared to the differential of the carburetor. Both of the men are well liked and their friends resent the ridicule which their candidacy is meeting in the trade.

For its annual dinner to be held at the Waldorf-Astoria, January 23, the Automobile Club of America has secured, among others, such well known speakers as Congressman W. P. Brownlow, the father of the good roads bill now before congress; Colonel Albert A. Pope, James B. Dill and G. E. Tarbell. Captain Homer W. Hedge, chairman of the com-

worth \$2,643,421. The count evidently had a premonition of disaster, as on the day before the race started he made a will leaving his property to his wife and son.

### COOPER'S 999 REJUVENATED

Detroit, Mich., Jan. 5.—Tom Cooper's 999 has been rejuvenated at the Ford factory. After its disastrous plunge through a new county fair building, where one of Cooper's men was putting it through its paces—and anything else that happened to be in the way—it was thought the machine was entirely wrecked and it was consigned to the scrap heap. When looked over carefully, however, it was discovered that the motor was practically unscathed, and some of the frames were in such condition that they could be used again. Mr. Ford took it in hand, changed the gear, altered the motor, bored it out larger, and, in fact, pretty nearly made a new piece of machinery out of it. Next Saturday Mr. Ford will take 999 out for a trial against the straight-away record. Lake St. Clair will be the scene of the trial. It is a sheet of ice several feet thick just now, and a course has been laid out on Anchor bay, at the north end of the lake, and about 25 miles from Detroit. Here there is a sheet of unbroken ice 12 miles in length, and on this a cinder track is being constructed. Mr. Ford believes this is about the fastest track which could be built. The only point is under what class would such records come?

# CLEVELAND GREAT MANUFACTURING CENTER

Cleveland, O., Jan. 4.—At the time of the New York automobile show last year it was commonly admitted, in view of the preparations being made by the fifteen or more recognized automobile manufacturers, that the Forest City would easily carry off the palm as being the automobile center of America. Later, however, due to several failures in Cleveland, together with the new concerns that have developed in Detroit, the citizens of the City of the Straits have been shouting that the center of the industry has been moved to the pretty little city across the lake. The New York show predictions have been fully carried out and so far as 1903 production is concerned Cleveland was ahead of any other city in the country, and while it is possible that next year will see more automobiles built in Detroit than in Cleveland, it is a safe guess that the value of the Cleveland built cars will total a larger figure than the productions of the Michigan metropolis. And if Detroit carries off the palm for numbers, her factories will have to turn out something over 4,000 automobiles, for Cleveland's output will undoubtedly reach that figure during the coming season.

Totalization of figures furnished to MORON AOE by Cleveland manufacturers indicates that 2,805 automobiles, with a total list valuation of \$3,589,250, were produced within the city limits during the season, not to mention the enormous amount of material for thousands of out of town manufacturers that was furnished by the numerous material manufacturers. Such figures are almost staggering when it is considered that only 5 years ago Alexander Winton took his first order for an automobile, and that it was not until 2 years ago that this pioneer manufacturer had what may have been said to be a competitor in this district.

It is not surprising that Winton, the founder of the industry in this section, still maintains his lead. The big factory, which at the time of its erection was undoubtedly one of the largest plants of its kind in the country, has been more than doubled in capacity in anticipation of the coming season's demand, and it is now unquestionably the largest factory of its kind in the world. In a city famous for large manufacturing plants, the Winton easily exceeds in floor space any factory of any description in Cleveland. The output during 1903 was 850 cars; not greater perhaps than several other factories, but with a \$2,500 list price for each machine the valuation of its product reaches \$2,125,000. For 1904 the Winton people are committed for 1,000 automobiles at the start. Material for that number has been ordered and work is progressing on a systematic routine on this basis. It is figured that these cars will be completed before June 1. After that it is an open secret, not yet officially announced nor yet denied, that work will start on a four-cylinder car already designed, and that several hundred of these will be produced. Thirteen hundred cars will undoubtedly be the Winton output during the coming season.

During the past year the White Sewing Machine Co. built and sold about 700 of its steam touring cars. Not only are these giving satisfaction to owners in nearly every state in the union, but the White people have invaded foreign countries to an extent perhaps greater than any other maker,

certainly any maker of steam vehicles. A prosperous branch store has been maintained in London and from that point Whites have been sold not only in the British Isles, but in France, Germany and Russia. While the White people have not erected an enormous factory for the coming season, their facilities have been greatly increased, and the output during 1904 will be considerably larger than it was this year.

The Baker Motor Vehicle Co., which by reason of its light, handsome and efficient little vehicle has acquired a position almost distinctive among electric vehicle makers, built about 400 runabouts and phaetons during the past season. For the coming season, in answer to a demand for a heavier car, the company will make a feature of the electric survey which was illustrated in a recent issue of MORON AOE. The Baker people are preparing plans for a large factory to be erected during the coming season, but it is doubtful if it will be completed in time to have much effect upon this season's output. But the company is preparing to increase its facilities at its present factory, and with the help of the new, the latter part of the season, the output of Bakers will probably reach 600 machines.

In the front rank of builders of high-priced touring cars is the Peerless Manufacturing Co. Sales Manager Kirkpatrick is explicit in speaking of their sales. Two hundred and ninety-nine—not 300—Peerless cars were turned out during the past season. Three of these were burned up before they were delivered, in a freight wreck, and three are now in use at the factory, making 293 cars actually sold. With an average price of \$3,500 this is an output not to be sneered at. The company will not attempt greatly to increase this output another season. With its present factory facilities this is impossible. But the company has made an early start and a number of cars have already been completed. It is probable that the output will not exceed 300 of the 24-horsepower cars and fifty of the 35-horsepower cars. The former range in price from \$3,700 to \$4,000 and the latter from \$5,000 to \$6,000, so if this program is carried out the Peerless company need not be financially embarrassed a year from now. As a matter of fact, Mr. Kirkpatrick maintains that he has bona fide orders for all but fifteen of the 350, which shows that his extended tours of late have not been in vain.

The General Automobile Co., formerly the General Automobile & Manufacturing Co., built about 130 of its single and double-cylinder cars during the past season. Since its failure the receivers sold about twenty-five cars in various stages of completion. The company has been reorganized and is now in strong hands. New models showing many improvements have been designed and it is probable that the output will be considerably larger than it was last year.

The number of cars built by the Cleveland Automobile Co., at the head of which is A. L. Moore, is not known for publication, but it is probable that 200 machines is about the figure. The company is going ahead for next season and will have a two-cylinder as well as a single-cylinder car.

The Hoffman Automobile & Mfg. Co., which has been succeeded by the Royal Motor Car Co., built about 100 cars during the past season. The machine was a light single-cylinder

runabout which proved very popular, a number of them being sold in Chicago. For the coming season the new company will build heavier cars; one model a two-cylinder car of 16-horsepower and the other a four-cylinder car of 32-horsepower. The new products show radical changes throughout and the Hoffman type of car has been wholly abandoned. The company is now in shape to make deliveries.

The F. R. Stearns Co., whose car made such a remarkable record on the recent New York-Pittsburg endurance run, as well as in later road tests, has never made any pretensions at being a large manufacturer. It has devoted itself to the production of high-class touring cars and has aimed to build only a few machines, but to make them as good as money and skill could produce. The output during 1903 was about fifty cars, and with increased facilities and an early start it is expected that this figure will be about doubled during the coming season. The Stearns people have completed four cars which will be shipped to the New York show. They illustrate the different types of finish and bodies the company will furnish during the coming season. One of the cars will have a limousine or coupe body, a type entirely new with Cleveland makers.

Paul Gaeth, a maker regarding whom little has been published and who has devoted his time chiefly to building cars to order for local people, sold in the neighborhood of twenty-five machines, the majority of them two-cylinder touring cars. Mr. Gaeth is preparing to expand during the coming season and has leased the factory formerly occupied by the Broc Carriage Co., corner Pearl street and the Nickel Plate railway, where he expects to produce quite a number of cars. His machine, known as the Gaethmobile, has acquired a very creditable reputation, and he will undoubtedly have all the business he can handle.

A newcomer in the field is a company not yet named, but backed by interests connected with the Russell Motor Vehicle Co., which has acquired a factory building having 15,000 square feet located at Leydon street and the Big Four railway. The Russell company sells parts and accessories of all kinds and the new company will manufacture these parts as well as build complete automobiles. The two companies will be conducted as distinct organizations, although they will be closely allied.

Otto Konigslow, the well-known material manufacturer, is building complete automobiles, but they will not be sold under the firm name. Fifty cars are now under construction for an out of town concern and the company will be prepared to furnish any of the parts embodied in the car, as well as in the general line of stampings, pumps, gears, etc.

The Berg Automobile Co., while not strictly a Cleveland concern, has recently increased its factory space and will be in shape to produce a considerably larger number of cars than it did last year. The Berg is a high-priced car which shows a number of distinctive features.

Brew & Hatcher, heretofore known as materials makers and general contractors, are building complete automobiles, although the cars will not be sold under their own name, being built to the order of an out of town manufacturer. The car will have 15 horse-

power, will carry five passengers and will weigh 1,500 pounds. The firm will embody in this car a number of devices of its own design and will be prepared to furnish them to other makers as well. The firm is doing a large amount of work for local and out of town makers, supplying complete motors, transmissions, pumps, oiling devices, carburetors, clutches, strainers, etc., some of them built after the specifications furnished by manufacturers and others after their standard designs. The firm has recently added to its equipment and is in shape to take care of a great amount of this class of work.

A new and unknown quantity in the local field in the Cleveland Motor Co., a concern headed by E. J. Pennington, who claims to have built the first motor cycles and the first automobiles ever constructed in this country. In the early '90s Mr. Pennington built a motor cycle in Cleveland which showed unquestionable practicality, but evidently he was ahead of the times, for the machine never became a commercial article in this country, although it is said he sold the foreign rights in England for a large amount and that motor cycles are still built abroad under his patents. Mr. Pennington's latest proposition is a gasoline horse or force carriage. He has announced that he is prepared to fill orders on his machine, which may be attached in front of any ordinary carriage. The machine is built in two sizes, a 7-horsepower single-cylinder and a 14-horsepower double-cylinder, both vertical motors. Demonstrations have recently been made in Cleveland and the device appears to operate satisfactorily. Mr. Pennington claims he will revolutionize the automobile industry. He is also preparing to supply an immense touring car capable of carrying twenty passengers and equipped with double-cylinder motor which will develop 300 horsepower. A car of this type is actually nearing completion, and the Motor Age man has seen it. Factories having unquestionable facilities for producing goods are at work on both types of cars, although it is not claimed that the 300-horsepower car will be produced in large quantities.

The coming season will see almost double the number of dealers than there were last year. Only one Cleveland retailer failed last season, and evidently a large number of people have become convinced that fortunes are to be made in selling and caring for automobiles. It is hardly probable that the number will ever become so great as in bicycle days, because it takes more money to make a start in the automobile game than it did in the other, but it is literally true that new concerns are springing up in every portion of the city. Practically all of the old concerns are preparing to move into larger quarters or have already done so, and next season Cleveland will support—or perhaps break—some of the finest automobile establishments in the country. Practically every line of importance in the country will be represented here and practically all of the local manufacturers will have branch stores or downtown agents.

The record for the largest number of sales did not fall to a Cleveland-built car last year. Ralph Owen, of the Ohio Oldsmobile Co., was easily the largest dispenser of automobiles. His sales numbered 480 cars, of which a trifling 300 are in use in Cleveland. The others were sold through agents in Cincinnati, Dayton, Columbus, East Liverpool, Akron and

Painesville. Mr. Owen is now calling on a number of prospective agents and he hopes to increase his list in this state. He also anticipates selling more machines in Cleveland another season, although he realizes that this will prove a most difficult task. To aid in this work Mr. Owen is planning to move into a larger store, where he will have better facilities for showing and handling his line. Mr. Owen has become interested in the automobile boat game and has taken the agency for the Bascom Boat Co., of Bascom, O., which manufactures a launch body. Mr. Owen is preparing to furnish any kind of engine desired with this body and will build launches practically to order. He will display a sample at the Cleveland show.

The now defunct Cleveland Automobile & Supply Co. was probably second in point of sales last year. About fifty Cadillacs and twenty-five of various other makes were sold and a very large number of cars were stored and repaired, but despite this fine business the company, in some way, failed to make ends meet. A. M. Barnes, receiver for the company, states that the affairs of the company will be placed in the Referee's court next week and that after matters have been straightened out the company will undoubtedly be reorganized by some of the old stockholders. He states that the lease on the fine Vincent street garage will be retained, and that in all probability the Cadillac will be a leader; this in spite of the fact that another concern claims to have secured the Cadillac agency.

Charles B. Shanks, at the Winton branch, sold in the neighborhood of fifty-five Winton touring cars last year. The outlook for next year is so promising that a larger establishment will be needed, and, as already outlined in these columns, work has been started on a very large garage to be located adjoining the present store.

George S. Walte, the White retail manager, gave the Winton people some very hard competition, and sale for sale they were about equal throughout the season. Mr. Walte is in charge of what is undoubtedly one of the largest, finest and best equipped garages in the country, and he is making every effort to increase his sales of last year. The new White, which is being shown at the local store, seems to possess a number of new and interesting features.

The Ohio Motor Car Co. will move into a very fine garage on Erie street, mention of which has already been made. This company will have the agency for the Cadillac and the Northern, and the Stearns will also be sold from its store, although not on an agency basis. The Stearns people have made an arrangement whereby they will conduct their own repair shop and have their own salesman and the business will be in charge of R. M. York, sales manager of the Stearns company, who will have a desk and devote a portion of his time there. All repairs on Stearns cars will be taken care of at this point, leaving the factory entirely free for manufacturing.

T. C. Whitcomb, who has been with the Ohio Motor Car Co., is at the head of the Whitcomb Automobile Co., which will locate in an establishment immediately adjoining the store of the Ohio company on Erie street, and will handle the Ford and National lines. There will be no connection between the two concerns and each will have its own repair and storage departments.

The Automobile Garage & Repair Co., 427 Erie street, did not close for the Peerless, as heretofore reported, and instead will make a leader of the Packard. It will also handle the Autocar.

The Peerless will be in the hands of the Phillips & Chisholm Automobile, which, as reported last week, will open a large garage on Euclid avenue in the east end. The Peerless company states that this will be one of the finest stores in the country and it will give the Peerless company a local representation such as it has never been able to secure heretofore.

Frank R. Blackmore, who has conducted an automobile repair shop on East Prospect street, has decided to build a garage adjoining his present place, which is located opposite Watkins avenue in the east end residence district. He has not yet closed for a line, but expects to do so in time for the Cleveland show.

The Geneva Automobile & Mfg. Co., whose local branch is conducted by B. T. and N. A. Quilling, at 260 Euclid avenue, enjoyed a very satisfactory season last year. About twenty-five cars were sold, some of them in the city and others in surrounding towns. The company made a special bid for physicians' business and sold a number for this class of service. The branch will be retained another season.

W. N. Booth, whose garage is located at Payne and Wilson avenues, sold several Overlands last year, and will handle this machine again, although he will take on another line. He expects to move into larger quarters in the spring.

The Acme Motor Car & Repair Co., S. Levi proprietor, is preparing to open a garage and repair shop on Euclid avenue near Wade park. He is open for a good line of automobiles.

P. X. Franz, formerly general manager of the Sandusky Automobile Co., of Sandusky, has the local agency for that car, and he is preparing to open a downtown store for the Sandusky. No location has been decided upon.

Cleveland's material manufacturers are almost too well known to require detailing. Every variety of article entering into the construction of any type of automobile is manufactured here and all of these manufacturers are now hard at work supplying material and parts for makers all over the country. It is the general sentiment that business will be larger than it was last year, despite the possibility of hard times, and the majority of the material people have contracts already booked which go to warrant this opinion. Among the lending material makers are the following: Federal Mfg. Co., pressed steel frames, chains, stampings and parts; Standard Welding Co., tubing, rims and electrically welded stampings and parts; American Ball Bearing Co., hubs and ball bearings; Innes Drop Forging & Mfg. Co., forgings and parts of all kinds; Parish & Bingham Co., steel wheels, pressed steel frames and special stampings; Otto Konigslaw, stampings and parts; Globe Machinery & Stampings Co., special parts; Bullock-Bresford Mfg. Co., spark plugs and ignition devices; Willard Storage Battery Co., storage batteries; Nungesser Battery Co., sparking batteries; P. H. Bultman & Co., gears; Hynden Eames, sales agent for supplies of all kinds; Theodore Kuntz, bodies; John Olsson, trimmings; Louis Doering, trimmings; I. J. Muefler, sales agent for general line.



## NORTHWEST PROVING A BIG FIELD

Minneapolis, Minn., Jan. 1.—The demands of the great northwest will be one of the big factors in the trade of American automobile houses this year. The anticipations of the most sanguine of the dealers are being realized even this early. Local houses, which to a large extent control the business of the entire northwest, are flooded with inquiries, and are closing orders for spring delivery every day. The past 2 weeks have given some indication of what may be expected as soon as the spring selling season opens. From every corner of the northwest inquiries, backed up by substantial promises, have been pouring in. During the 2 weeks there has been more activity in automobile circles than during the same period in March of last year. The business of the year just closed was little short of marvellous. The dealers who endeavored to supply the enormous demand for machines were driven to desperation in their attempt to get machines, and to secure quarters for storing, selling and repairing.

Two new automobile establishments were erected during the year, and several of the dealers took time to move into larger places. Not until the end of the season, however, did they have time to figure on new quarters sufficient for all purposes. With the season over, however, all of the principal houses made immediate plans for more room. As a result, one new four-story building, one new three-story structure, and several additions to present quarters are being erected in Minneapolis; while two St. Paul firms have already moved into new quarters as large and complete as the majority of the eastern houses.

The trade last year simply swallowed up every machine of any kind that could be secured. Sample machines sent out for inspection from eastern factories were sold before the dealers had a chance to show them to more than one prospective customer; and in many instances, where the dealer tried in vain not to sell. The big touring cars were sold to some extent, but the greatest run last year was on the lighter runabouts and convertible types. These proved the most popular on account of their serviceability, and they are sure to be the big factor in the business this year.

From the opening of the season last year, the country demand for cars gave local dealers great trouble. The demand in St. Paul and Minneapolis was taken care of by the middle of the season, but the cry for cars from out-

side, throughout Minnesota, and North and South Dakota, and even from Montana, increased as the prospects of a good harvest increased. Farmers, country doctors, and business and professional men who do business in the country, snapped up the cars as fast as they could get, and started home across country. In this way machines were placed all through the state, in many cases without the aid of traveling representatives, or any kind of soliciting.

And it is from these cars that the dealers are now hearing. The demand from the country promises to be something to furnish the dealers with plenty of trouble, if cars cannot be had when wanted. Minnesota roads have improved greatly during the last few years, and it is safe to say that before many more have passed, the town-to-town traffic of the state will all be done by automobiles. But local dealers are not fearful of a shortage of cars. They have made all plans for early delivery of stocks, and have placed orders for hundreds of cars, so that there will be no chance of a shortage.

Most of the houses are planning for an immediate opening of business outside the Twin Cities. Traveling men will be put on this month by most of the houses as the majority of the machines are handled throughout the entire northwest by their local representatives.

Sub-agencies will be established in all of the principal cities of the northwest by the local dealers, and through these agencies the country trade will be supplied. The Pence Automobile Co., which handles the Autocar, Cadillac, Packard, Stevens-Duryea and other cars, has thus far established ten sub-agencies in South Dakota, about the same number in Minnesota, and several in North Dakota.

The car to be sold in the cities this year will probably be the medium priced car—and the largest car obtainable for the price. A large number of the big touring cars were placed here last year, the Winton and Packard leading, and more will be sold this year. But the smaller car, furnishing good power and plenty of capacity, with a medium price, will sell to the best advantage. The runabout will be of course be popular, though it is doubtful if they will predominate the sales, as they did the past season.

From the country the demand is almost entirely for the runabout, suitable for road work. Good machines, with tonneau detachable, and capable of standing road work, as they proved they could do, will go like proverbial hot cakes among the prosperous farmers, and country merchants and professional men throughout the country.

It is believed by dealers that the demand for electric in Minneapolis will increase materially this season. St. Paul has taken hold of the electric with enthusiasm, and has many more than Minneapolis. The level streets of the latter city have been so conducive to speed trials that motorists have considered the electric too slow for their purpose. It has grown in favor, lately, and many orders are now being placed for electric machines.

Among the dealers, one of the most prolific subjects of conversation is the delivery wagon. Local merchants have been besieged during the winter by the dealers, and it is believed that the siege has not been in vain. Several of the largest commercial houses of the city have been using trial wagons, and are ready to install more complete lines in the spring. The dealers are pushing the delivery wagons hard, and intend to place a great many of them. Most of the wagons will be of the lighter city delivery style, although several houses are figuring on trucks and heavier wagons.

The new building for the Pence Automobile Company, which is rapidly nearing completion, will scarcely have an equal in the west. It will consist of four stories, and full basement. A 40 by 40-foot exhibition room will be located on the first floor. As the dimensions of the building are 50 by 130 feet, this leaves a large garage space on the main floor.

The second floor will be devoted to repair shop and machine shop. The front of this floor, 50 by 30 feet, will be used as club rooms by the Minneapolis Automobile Club. The third and fourth floors will be devoted to storage. The building will be heated by steam and equipped with a large electric elevator.

A. F. Chase & Co., northwestern agents for the Oldsmobile, have started work on a new building, to be occupied exclusively by them. The structure will be two stories and basement, and will be equipped in the most modern manner for the automobile business. Both the Pence and Chase buildings will be ready for occupancy by March 1.

## CHICAGO HOPES TO DOUBLE BUSINESS

Chicago, Jan. 5.—The new year will be more strenuous than the one just closed among the automobile dealers of Chicago. There are more cars to be sold and more agents to sell them this year, and while it is probable there will be more buyers, it is undoubtedly true that more effort will be required on the part of the dealers in order to get a satisfactory balance on the right side of the ledger. Last year many sales were lost because of the inability of the dealers to supply the demand, but this season the manufacturers think they have more accurately gauged the situation, and the supply is likely to more than meet the demand. The general public is better informed now on the automobile and the average buyer knows about what he wants, and he is sufficiently well posted to be able to make a

choice among the many cars offered for sale.

"There have been fewer inquiries and sales during the past month than there were during the corresponding time last year," said Walter L. Githens, of the Githens Bros. Co., agent for the Oldsmobile. "This may properly be ascribed to the extremely cold weather, which has caused people to temporarily forget the pleasures of automobilizing, but with the first breath of pleasant weather the thought of the motor car will return. We find that the inquiries of prospective customers are now of a more technical nature, and the public seems to be better informed in regard to the practical use of the automobile. The demand this year will be for cars of proven worth and reliability. We anticipate a greater volume of business the coming year than ever before,

and with the increased facilities at the factory we will be able to accommodate our customers promptly. Our new models will give a greater variety and we can now supply almost anything desired in the automobile line."

"I believe there will be keener competition among the dealers this year," said Frank P. Hilsley, "because there are more dealers and more manufacturers represented. There are about thirty-five dealers in Chicago, and I estimate the sales for 1904 will be about 700 cars. This means that there will be some hustling if each dealer gets his share of the business. The people are demanding a practical vehicle that will stand up under test, and the manufacturers will have to build with greater care and avoid many of the trifling errors of past years, most of which resulted from care-

lessness; or possibly from inexperience, would be a better way to put it."

J. B. Duhler, manager of the Chicago branch of the Haynes-Apperson Co., is optimistic and believes the coming year will be a busy one for the manufacturers and consequently a profitable one for the dealer. He thinks touring cars will be in much greater demand, and is firm in the intention to do his share toward supplying the people with what they want.

Dan Canary, of the Dan Canary Automobile Co., 521 Wabash avenue, pins his faith to the French machines, and thinks the foreign cars will have a greater sale this year than last. "The French makers turn out a superior car," he said, "and while they ask more money for

their cars, the difference in reliability and service is worth the increase in price."

C. J. McLain, manager of the Apperson Bros. Automobile Co., Chicago branch at 394 Wabash avenue, thinks the coming year will be a good one for the sale of large cars, and he expects a larger volume of business than that of last year. M. E. Cooke, who handles the Reber car in Chicago, has his office with Apperson Bros., and anticipates a large sale for his car, the inquiries coming in at present showing that the public is desirous of learning more about the Reber car than is told in the trade journal advertisements.

A. C. Banker removed last Monday from 460 Wabash avenue to the Kinball building in Michigan avenue, where he will stay until

April 1, at which time the building at the northeast corner of Thirteenth and Michigan will be completed. This building will be 100 feet front and three stories high. It will be occupied jointly by Banker and the Winton Motor Carriage Co. Banker is preparing for a big sale of Autocars the coming season. He may add other cars to this line after the New York show.

The Greer Motor Car Co. is established temporarily at 508 Wabash avenue, where a stock of second hand cars is offered for sale. The company is negotiating for a location on Michigan avenue. The president, Frederic Greer, will go to the New York show and arrange for the Chicago agency for one or more cars for the coming season.

## WASHINGTON TRADE DOUBLE PREVIOUS YEAR

Washington, D. C., Jan. 2.—The year just passed was in every way the most satisfactory the Washington automobile trade has ever known and the dealers enter the new year with a feeling of the utmost satisfaction. Fully twice as many machines were sold during 1903 as during the preceding year, indicating a remarkable increase of popular interest in the automobile question. The capital city is growing steadily, a fact that is forcibly brought out in the new city directory, just published, and the automobile trade is sharing in the general prosperity. While the trade has had many things with which to contend, particularly the automobile regulations drafted early in the year, which were bitterly fought by the automobilists, thus causing the daily press to raise a big hue and cry against the automobile with the result of seriously hampering the sale of machines, the dealers have nevertheless steadily overcome every obstacle and have made up the ground they lost temporarily by this foolish newspaper agitation.

The greatest demand during the year was for cars of small type, like the Oldsmobile and Cadillac. Vehicles like these fill a very important place in automobilizing, and they are likely to continue in public favor here. The larger cars have also had a good sale and increased demand for them is predicted by all the dealers.

All the members of the local trade appear to take a decidedly optimistic view of the outlook for business during the year just opening; if the expression of opinion given by them to a Motor Age correspondent may be taken as a criterion. In spite of the gloomy view that some have seen fit to set forth in other trades, the local members of the automobile trade seem to think that there will be good business this year, and they are going to conduct their business on that basis.

One of the best posted men in the trade gave the following views: "That just ended was our banner year, the volume of business showing an increase of fully 100 per cent over 1902. This is a very gratifying showing, in view of the adverse conditions which prevailed during a portion of the year. Regarding the prospects for business during the next twelve months, it looks to us as if the good record of 1902 will be sustained. It is presidential year and, of course, there is the usual fear among the timid that a change in the administration will cause such an overturning of public policies as will exercise a bad influence upon business. What a presidential year may bring forth can only be predicted, but we are not crossing any bridges until we come to

them. Summed up, we shall probably see that the year will be a good one in the automobile trade and we will likely find ourselves richer at the end of 1904 than now."

The Washington branch of the Pope Mfr. Co., which is under the management of W. J. Foss, has just passed through the most successful year it has had since automobiles were added. The percentage of increase in the volume of business was fully 100, and all the various machines carried in stock, including the Cadillac, Toledo and Waverley, shared in the good record. The line this year will be augmented by the Pope Hartford runabout and the Pope Tribune. Manager Foss is of the opinion that the covered automobile will have a great sale. He has in mind a number of improvements in the salesroom that will give him better facilities to show his stock. These will be undertaken at an early date, so that everything will be in readiness for the spring trade. Mr. Foss predicts another record-breaking year in the sale of automobiles.

The Willard Automobile Station entered the field late in the year, but the results achieved cannot fail to give great satisfaction to those who compose the company. The Ford car will continue to be the leader with this establishment and probably one or two other makes will be added after the New York show. Manager Kull is very optimistic regarding the outlook for business and is making plans to handle a great amount of business.

The Edison Automobile Station is another concern that commenced business when the year was half gone, but Mr. Edison has no cause to complain of the amount of business that fell into his hands. He has relinquished the agency for the Pan-American and the Holt and is now negotiating for one of the most popular cars on the market.

Progress has been the watchword with the National Capital Automobile Co., and material progress has been made by the company. Excellent business has been done with the Oldsmobile, and also with the Peerless, Packard and Pierce. A big year's business is looked for by the members of the company.

Cook & Owensney, local agents for the Winton, Stevens-Duryea and Orient buckboard regard the outlook for business this year as being fine. Last month they celebrated the first anniversary of their entry into the local field and they are much pleased with what was accomplished during the year.

There will be a full representation of the local trade at the New York show and it is expected that a number of new agencies will be made.

It is understood that the difficulties between David K. Joslin and the Edison Automobile Station, arising from the use of the name of Edison by Joslin and others, has been settled to the satisfaction of all parties concerned. The Motor Age correspondent was unable to get complete details, but from the information at hand it seems that Mr. Joslin will in future conduct his automobile business on Connecticut avenue, under the name of the District of Columbia Automobile Co.

The National Capital Automobile Co. has requested the district authorities to reconsider their decision, declining to permit the company to maintain a wooden structure building against the side of the company's garage on Eighteenth street. The company explains that the shed is not for the purpose of holding gasoline barrels indefinitely, but is to be used as a temporary place where the gasoline barrels can be put while their contents are being transferred to an underground tank. The building inspector has recommended that this building, for which no permit was ever issued from his office, be removed, according to the former direction of the district commissioners.

The National Electrical Supply Co. has filed with a justice of the peace suit against the Edison Automobile Co. and David K. Joslin for a debt of \$276.57.

The National Capital Automobile Co. has given a bill of sale of certain chattels in the garage at 1120 Eighteenth street, northwest, to S. S. Olds, Jr. The chattels consist of certain automobiles which were transferred to Mr. Olds in lieu of certain money owed to him by the company.

### DETROIT SHOW SPACES TAKEN

Detroit, Mich., Jan. 4.—At this writing practically all the spaces for the Tri-State automobile show in the Light Guard armory have been sold. Only four spaces, these in the gallery, are left, and sixteen manufacturers are on a waiting list for space on the main floor, which they will probably never get for this year's show. About all the larger firms will be represented, and the prospects are for a very successful show. The way in which the annual show has taken hold of Detroit is something wonderful. The first one was given 2 years ago, and few people outside of its promoters had much faith in its becoming a popular annual feature. Last year, however, all the spaces were sold and the big building was crowded every day. This year the exhibitors made such a rush when the space was offered that within ten days everything was gone but a few gallery spaces.

# SYRACUSE NOW AN AUTOMOBILE CENTER

Syracuse, N. Y., January 5.—The past year has been an eventful one in the automobile industry and those engaged therein find no cause for discouragement. At the beginning of the year it was seen that there would be an unprecedented demand for automobiles and the manufacturers made plans to turn out a large number of machines. The expectations as to the number of people who would be using automobiles before the summer was over were more than realized and it is through no fault of the consumer that two Syracuse companies ceased to manufacture automobiles. The trouble in both cases was lack of capital to turn out the necessary number of automobiles and to make a profit thereon.

During the year the H. H. Franklin Mfg. Co. has occupied its factory, which has been duplicated by a factory still larger than the first. The second building has only recently been occupied and the number of employees has been increased from seventy to over 300. The company believes it has demonstrated that the principal of air cooling is a success and its career is one of the most interesting developments of the year. The company has already sold three times as many cars for 1904 as were made during 1903.

The Century Motor Vehicle Co. took orders enough at the New York show to keep its factory busy during the entire year and the automobile world was greatly surprised early in the summer to hear that the company had closed its factory and called a meeting of its creditors, offering to settle for 25 cents on a dollar. The company produced an excellent gasoline machine but was unable to swing the amount of business it undertook. This fact, coupled with the impossibility to turn out cars at the price at which it was estimated they could be turned out, forced the company to give up the ghost until matters could be straightened out. Affairs are still in an unsettled condition, the probability being that before the new year is far gone either the Century company or a new concern will be turning out automobiles at the factory in East Water street. The Century company went to great expense in purchasing new machinery and has one of the finest automobile plants in the country.

Two months before the close of the old year it was announced that the factory of the J. S. Leggett Mfg. Co. had been closed and that the company had decided to liquidate its affairs. J. S. Leggett resigning as president and general manager. The company was perfectly solvent and paid 100 cents on a dollar. One mechanic is still at work there finishing up a few machines. It is rumored at the present writing that this company will also be reorganized and will turn out a machine for 1904. The trouble with the Leggett company was that its stockholders did not put up enough capital to conduct a business large enough to yield profits.

Upon the ruins of the I. A. Weston Co., which manufactured automobile sundries, has sprung up within the past week the Jamesville Mfg. Co., which has been incorporated to manufacture automobile parts. The directors of this company are Albert Spencer of Jamesville, Herbert Hotelling of Syracuse, James Olcott of Jamesville and A. H. Spencer of Rensselaer.

It is probable that at least four concerns will be turning out automobiles in Syracuse dur-

ing the new year. The manufacturers of automobile necessities have had the most prosperous year since the beginning of the business. The Brennan Motor Co. has had to enlarge its factory and put on more men in order to fill the demand for gasoline motors which it sells to large manufacturers and to individuals. This company has worked up a large and profitable business by furnishing motors in connection with completed drawings for automobiles and a large number of such machines are in successful use all over the country. Mr. Brennan says he has no doubt that 1904 will show a great increase in the use of automobiles. He bases his conclusions upon the number of orders he has received from manufacturers and from his immediate contact with the trade.

During the year the Brown-Lipe Gear Co. has taken possession of the offices and factory formerly occupied by the Franklin Automobile Co. and during the greater part of the year, according to manager H. W. Chapin, the factory has been running nights. Gears and transmissions made by this concern are being successfully used by a large number of manufacturers, including the H. H. Franklin Mfg. Co. of this city.

The New Process Raw Hide Co., which makes gears and other parts for automobiles, will, during the new year, erect a new factory. This company has been educating the public to the use of gears made out of hide and treated by a patent process. Those interested in the company prophesy a greatly increased business in 1904. The new factory will cost \$20,000.

A rival of this company has been just formed under the name of the Syracuse Raw Hide Mfg. Co., which will also make gears for automobiles and other articles out of raw hide.

In September of the past year, the last day of the state fair, the Automobile Club of Syracuse gave the first race meet ever held here. One of the largest crowds of any meet of the year was present and saw good sport, although the particular stars expected were unable to come. The success of this meet was such that it will undoubtedly be an annual event. That it stimulated the sales of automobiles in this city is unquestioned.

The Syracuse Automobile Co. closed the year with an auction, in which it disposed of all the machines it had left preparatory to moving into the big six-story building in South Salina street, which will be its home during the coming year. All the accessories of an up-to-date garage will be found at this plant. This company will be the local agent for the Franklin, Oldsmobile, Winton and several other leading machines. President Cornwall says he expects to sell three times the number that he did last year.

W. H. Bissell opened a new garage in South State street during the last month of the old year. Mr. Bissell has a convenient and well equipped plant and will also be the agent for several of the leading makes.

The Central City Automobile Co., which flourished for a few months and then went to the wall, conducted an elegant automobile station in East Genesee street, but was compelled to give up owing to poor management and lack of capital. This concern had what was one of the best equipped plants in the state and the owners of machines were sorry it was compelled to go into bankruptcy.

The year has been prosperous for the Auto-

motive Club of Syracuse, which has nearly doubled its membership. Owing to the work of two members of this club, Frederick H. Elliott and Harbut W. Smith, the state automobile association was formed in this city, embracing every club in the state. Together they will work for satisfactory laws and for the interest of automobilists.

The latest club which has just been organized is the Chenango Automobile Club, with the following officers: President, C. W. Lamphere; vice-president, C. H. Latham; secretary, H. W. Storer; treasurer, H. H. Higley. This club will probably affiliate with the state organization. Mr. Elliott, the secretary of the state association, will during the coming year open headquarters in this city and devote his whole time to the interests of the organization.

## BUFFALO'S JUMP IN ONE YEAR

Buffalo, N. Y., Jan. 4.—The year 1903 practically opened the automobile boom in Buffalo. Previous to that time there was owned in Buffalo not over 300 cars. At the outset there were six manufacturers, five of whom were making gasoline models and one electric; three of these—Spaulding Automobile Co., Conrad Motor Carriage Co. and Kensington Automobile Co., together with the Morlock Automobile Co., which succeeded the Spaulding company—have been compelled to make their exit from the industry. There are now two gasoline car manufacturers, the Geo. N. Pierce Co. and E. R. Thomas Motor Co., both of which have attained enviable positions in the trade. The Buffalo Electric Vehicle Co., it is said on good authority, will move its plant to New York City, but owing to the absence of the president, F. A. Babcock, this is not verified.

The garages and retail stores, while not numerous, are apparently satisfied with the result of the year's business. About 400 new automobiles were sold during the year, principally of the runabout class—gasoline for power, of course, predominates; there is practically no sale for steam cars and the electric carriage has but few admirers outside of women operators. While a big increase in business is anticipated for this year, the general impression is that there are too many agents. There are twenty-two retail dealers in the city, while others contemplate opening stores.

The Buffalo Automobile Club was barely existing at the dawn of last year, but a revival took place in the spring. A large dinner party was held to which automobile owners and the trade was invited. The old club was reorganized and W. H. Hotchkiss elected president and F. J. Wagner secretary. They have worked untiringly in the interest of the organization with the result that the club now is about the strongest, numerically, in the country. A membership committee for this year, consisting of five hustlers, will doubtless bring the membership close to half thousand before the snow flies next fall. The club held three runs during the summer and entertained the contestants and their friends during the endurance run from New York to Pittsburgh. The club and trade association will jointly run the automobile show March 6 to 12.

The trade has organized a very strong association and counts in its membership every dealer in the city, as well as all the tire houses with branch stores here. All in all Buffalo has made such strides that, if the rate is maintained, it will be a leader.

# BOSTON'S AUTOMOBILE GROWTH WONDERFUL

Boston, Jan. 4.—While standing on the threshold of a new year and looking over the twelve months that have gone, one cannot help being impressed with the great progress made in the automobile world; not only in the manufacture of motor vehicles, but also in the more common adaptation of the same. This is apparent in all sections of the country, but in no one city more than in Boston, which, noted for its conservatism, was somewhat tardy in accepting the automobile. Once recognized as something more than an experiment, however, the motor vehicle has become most popular, and its onward march has been somewhat like that of the youth with the "seven leave boots."

It might really be said that until last winter Boston was hardly awake to the possibilities of the automobile, and while it is true that several first-class agencies and automobile dealers had established themselves in business in this city, the results were not then so beneficial either to the dealer or the manufacturer as they might have been. This was eminently shown by the hauling together of the dealers for the purpose of increasing the automobile interest, and in the endeavor to interest the masses in the automobile. The endurance run from New York to Boston and return excited the interest and the curiosity of the people; but, strange though it may seem, the real interest was not awakened until towards the opening of last year.

The Massachusetts Automobile Club, to be sure, possessed a fine club house and a good list of members, but, like all such organizations, the club kept to itself, and its affairs in the main interest none save its own members. But the opening of 1903 saw a great change, a change which has been a continuous one until today Boston is recognized by the manufacturers of the country as one of the leading automobile cities on this continent. This, of course, has been brought about by the general activity of automobile interests, by the crusade waged against unfavorable legislation during the last session of the state legislature, the holding of two automobile shows, the hill climbing contest, the race meet at Readville, and the general activity of all things in the automobile world.

The Massachusetts club was interested in

the first automobile show, the dealers in the second, and the club in both the hill-climbing contest and the race meet, all of which proved successful and gave to Boston an interest previously conspicuous for its absence. New dealers opened their establishments on the automobile rialto, talked business, canvassed the trade, made interesting news for the newspapers, and all in all seemed to vie one with the other in advancing the general cause. The visit of the Automobile Club of America to Boston late in the summer and that of the Rhode Island Automobile Club maintained an interest, while as a fitting climax to the racing season came the fine race meet at Providence, which, being so close to Boston, was by many considered as a Boston proposition.

Touring likewise became popular with the majority of the owners of automobiles, while the invasion of the north and south shores by the summer residents with their heavy and high-powered foreign automobiles must also be taken into consideration as having a bearing upon the increased interest in the motor vehicles. Many Bostonians likewise imported big machines, which never failed to attract attention, not alone from the owners of wagons but also from prospective purchasers.

The rivalry between the several dealers as regards the holding of the Commonwealth avenue hill climbing record also had a most beneficial effect upon the trade, as the making of those records created news for the dailies, and, this being published, was read and caused discussions of a general character.

It would indeed be difficult for one to determine just what was responsible for this great awakening to the cause of the automobile in Boston. There really was no one particular thing. It was a combination of favorable circumstances which lifted the city to a much higher plane in the automobile commercial and pleasure world.

New garages were built and opened by dealers, new firms came to the city, and what was once known as the cycling rialto has now become known as the automobile district.

Commercially, the year was a most successful one, as shown by the books of the divers concerns, many of which did a greater business in Boston last year than in any other one city in the country, and that is by no

means exaggerating the true condition of affairs.

The outlook for the coming season is one full of promise for a successful business year. This fact is amply demonstrated by the crowded condition of the automobile district. The demands for salesrooms along the avenue are greater than is the supply, several firms have been crowded into nearby streets, and still other dealers are now looking for quarters. New garages are to be constructed or rented by several dealers, such for instance as the Peerless and White people, who are to build; Winton, who is to enlarge the present fine quarters; Thomas, who has secured new salesrooms and garages; Pope, who is likewise in search of new storage places, and Skinner, who is to make extensive improvements in order to take care of his increasing business.

One significant fact in relation to business affairs in Boston is the establishing of agencies in this city by many of the foreign manufacturers, such for instance as the de Dietrich, the Mercedes, the F. I. A. T., the Georges Richard-Brasier and other firms, which have never had agencies east of New York city. There is hardly a manufacturer of automobiles—gasoline, steam or electric—in this country but what will have a representative in this city the coming year, and a comparison of conditions at the present time with those of a year ago, when the dealers and agents could easily be counted on the fingers of both hands, shows full well the great advancement made in the automobile commercially.

Other than in a trade way the season is fully of promise. Starting with the automobile show in March, the indications are that there will be a long list of events. In April the hill climbing contest will be held, then in May comes the race meet under the auspices of the Massachusetts Automobile Club, which organization, by the way, starts on the construction of its new quarters next week. Following the races will come tours under the auspices of the several automobile clubs in the state, with perhaps another race meet in the fall. There is every reason to believe that the year 1904 will eclipse all its predecessors in both business and pleasure.

# DETROIT MAKES EIGHT THOUSAND MACHINES

Detroit, Mich., Jan. 1.—The year 1903 was the most successful, both from the manufacturers' and from the retailers' standpoint, that Detroit has ever known. About 8,000 automobiles of pretty nearly every model known to the gasoline type, from the little Olds to the big Packard, made up the result of the year's work in Detroit factories. From the retailers' standpoint the year was better than even the most sanguine dealer had expected. Detroit's fine pavements have led hundreds to go in for the sport. Every one of the dealers, and pretty nearly every type of American or foreign machine is represented by its agencies, reported that the year had been most satisfactory.

William E. Metzger, who was the pioneer in the automobile trade in Detroit; W. C. Randa & Co., who represent the Oldsmobile; John P. Schneider, state agent for the Peerless, and the other dealers, all state that the

business of 1903 was the largest in their history. The automobile trade of the entire state of Michigan is practically done through Detroit.

The Detroit-made machine, which has made great strides in popularity in 1903, is the Cadillac. A year ago the Cadillac company was in its infancy. The first machines were just being put on the market, and the factory capacity was possibly 200 per year. This capacity was largely increased, however, in the early months of 1903, and for the year that ended December 31 the output was a few over 2,500. It is needless to say that every machine made was sold, and most of them were sold long before they ever left the factory. Indeed, this was the greatest problem of the company, and though the weather during the last month has been the coldest and most disagreeable in years, it has been found absolutely necessary to work overtime on the big new

buildings which the company is erecting; this when all other building operations in the city are at a standstill, because of the inclement weather. Last week Motor AGE reported the purchase of additional ground by the Cadillac people. Plans were completed and accepted on New Year's day for another huge structure, which will have a floor 193 by 93 feet. This is to be used for a testing room, and will be entirely separate from the rest of the factory. Sixteen large testing platforms will be installed. They will be of special design, including several novel ideas for the thorough testing of machines. Friction, wind resistance, carrying power and, indeed, every item which is vital to the construction of the modern automobile will here be as thoroughly tested as human ingenuity can contrive.

When these new improvements are completed, which will be by the middle of February, the capacity of the Cadillac plant will be

almost doubled, and General Sales Manager Metzger has issued instructions to all traveling salesmen that 3,500 machines will be ready for delivery and may be sold for July 1. He places the total output for the year at 4,000, but this figure may be increased if the experiences of the company for 1904 are similar to those of 1903.

In his garage Mr. Metzger is just completing a number of improvements, made necessary by the increasing demands of his business. The offices have been banished from the first floor and now occupy the entire front portion of the second floor. The two-story building which he erected little more than a year ago has been made into a six-story structure, every floor of which is devoted to his automobile business. Not the least interesting portion of his garage is a new department upon which work has just been commenced, where special bodies will be built to order and special work of all kinds done.

"The next move in the automobile industry," said Mr. Metzger, "is going to be the construction of special bodies. As a class automobilists are people who have the means and desire to have something distinctly their own. People are not going to be satisfied very long with machines which are just like every one else has or can buy. They are going to demand individuality, and that is what the new plant in my garage is to supply. We will design and construct special bodies, do fancy upholstery and indeed that portion of the plant, given the chassis, will be enabled to turn out a complete automobile of any style or design demanded."

Detroit's biggest automobile manufacturer is, of course, the Olds Motor Works. A few months ago this company had concluded to close its Detroit plant, sell the ground and

conduct all its business from the plant which it was constructing in Lansing, Mich. It had suffered from one of the most disastrous fires that ever affected the automobile industry, and it was not considered worth while to rebuild the plant. A temporary plant was opened, but within a month or two the business of the company had assumed such proportions that every inch of space it was possible to utilize was necessary. As it has come about the Detroit plant has been enlarged over what it was before the fire, instead of being closed up. The Lansing plant has been worked to its capacity and even then the company has had to have some of its work done on contract outside. The closing months of the year 1903 found the capacity of the Lansing and Detroit factories just doubled over that of the early months of the same year. W. G. Morley stated that between 6,000 and 7,000 automobiles would be the output for 1904.

"We sold as many machines abroad last year as all the other American companies combined," said Mr. Morley. "We had a magnificent exhibit at Paris, next the main entrance to the exposition, and nearly 100 orders were taken at that show. We have not sold any in Iceland or Lapland yet, but I guess those are about the only countries which have not seen the Oldsmobile. More than 100 were disposed of in Russia alone."

The Packard people expect to turn out about 350 machines during the coming year. The new model L car will probably be one of the most popular of the several models and it is the intention to push it vigorously.

The new Packard factory has been in operation since November 10 with 270 men and since December 1 the works have been running 90 hours a week in order to keep up. The cars for the shows have been completed and the

first part of February will see all Packard agents supplied with samples, after which deliveries on orders will be made.

Henry Ford, the man who is fighting the Ives association, states that he will turn out 2,500 cars during the year. "We began work July 23," said Mr. Ford, "and in the remaining months of the year turned out and sold 450 Ford machines. We are now at work on our four-cylinder, air-cooled, touring car, and will have it ready for the shows. We will be ready to deliver these cars in a few months, and I am very confident that they will make a hit."

The Northern Automobile Co. management expressed itself as more than pleased with its business in 1903. "We turned out more than 500 automobiles," said Mr. Miner, "and could not keep up with our orders. I do not think we will be able to handle all the business we could get in the coming year. We have cut the price of our single cylinder car from \$800 to \$750, and have put many improvements in it. We are just now completing our two-cylinder car for the New York show. This is our '15' car—15 horsepower, 1,500 pounds, and \$1,500, but more than 15 miles an hour. This car has direct drive. The tonneau is not detachable and it is a thoroughly practical touring car. It will be on the market in May."

The new Barthel Motor Co. expects to begin work in a few days. The output will be about 200 for the year; at least that is what is being figured on now. The company has already completed two cars.

In addition to these companies there are nearly a dozen men who are building automobiles, a few at a time, and of various shapes, sizes and models. Their total output will amount to possibly another 250 cars.

## GORDON BENNETT RACE DETAILS

It was decided upon the suggestion of Reue de Knyff that while the cars must be made completely in the country of their origin, the core in the magneto and the fabric in the pneumatic tires were made exceptions.

Many private families along the course of the race have already rented rooms. This is particularly true regarding Saalburg, where it is reported that some Americans have paid deposits, while others have given written guarantees for rooms.

It has been decided that when any two drivers reach a control with less than 30 seconds intervening, the one credited with the better time will be given the first start. The idea was originally suggested by Jenatny. The former regulation was that if a driver caught another somewhere on the road but reached a control 30 seconds after him, he had to wait 4 minutes before being permitted to start.

Up to December 19 only three French manufacturers had entered for the trial races: Panhard & Levaassor, de Dietrich, and Gobron-Brillie. The de Dietrich people announced that Jarroft, Gabriel and Rougier will drive cars, and Duray and Rigolly will drive two of the Gobron-Brillie cars. The Daimler Co. has informed the German Automobile Club that Jenatny and Baron de Caters will drive its two Mercedes cars.

An alcohol hill climbing contest on the Feldberg, a competition in appearance at Homburg and an automobile motor boat race from Mainz to Bingen-on-the-Rhine, will be

arranged during the Gordon Bennett meet, according to the statement made by the German Automobile Club's representative at the recent Paris congress. "We will spare no effort," said Count Sierstorff to the representative of the other seven countries which attended the meeting, "Germany will show its foreign friends that it can do things as right in every detail as any other nation."

The preparations for the big race which is to take place in Germany either in June or July of next year, are taking a larger scope every day. Late advices are that a delegate of the German Automobile Club has sent a circular letter to all the hotel keepers in Saalburg, Homburg, Frankfort, Wiesbaden and other cities near the route, requesting them to send him full information as to the capacity and rates. When the information is received a circular will be issued and sent to every automobile club in Europe, with the request that no time be lost in selecting headquarters, as it is feared sufficient room will not be available.

At a recent meeting of hotel owners and restaurant proprietors in Frankfort, plans were laid out to start at once to prepare for the visitors at the big race. A member of the German Automobile Club stated that from present indications at least 15,000 to 20,000 visitors from foreign countries will see the event. All over Germany caravans are being arranged and there may be fully 20,000 native visitors. Information received from Paris point out that about 500 members of the Au-

tomobile Club of France intend to cross the frontier in their cars, while more than 1,000 others from the French capital will go to Saalburg. Garages will be made to accommodate at least 5,000 motor cars. It will also be necessary to build special hotels in the vicinity of the course. An agreement will probably be reached among the hotel men for a uniform scale of prices according to the different classes of hotels.

The principal topic of conversation among Belgian motorists is the sudden change of mind of the leading automobile manufacturers not to take part in the Gordon Bennett race. Manger Lehmann, of the Metallurgique Co., stated in an interview that the principal reason of this must be traced first to the rather unsatisfactory steel made in Belgium. "It is good steel, but by no means resistant enough for racing cars that will have to go at 70 and 80 miles an hour. Second, we have no rim factory which can furnish strong enough rims. Third, while Belgian manufacturers have made some racing cars they never did it on the same lines as the French and German. We merely did it for the purpose of having our names mentioned, but for improvements and changes to be made on our cars we have had recourse to either private tests or endurance runs. It is likely, however, that from now on Belgian manufacturers will enter the racing game for all it is worth and I personally believe it is of great help to the trade and the general public."

## THE READERS' CLEARING HOUSE

### VICTIM OF PREJUDICE

Parsons, Kan.—Editor *MOTOR AGE*—I own a gasoline runabout, the only one here. On account of another's disregard for the public a prejudice against automobiles has sprung up, and where there were other machines, I am the only owner now. I am an old bicycle rider and member of the I. A. W. and have always been careful. In the year I have owned my machine I have had no trouble until now.

In running down a back street, or alley, I did so to avoid teams. I turned to the right on to a main street. A train blocked the crossing ahead, so I was not running more than 3 miles an hour. A team approaching me from behind, on the main street, became frightened, turned and started back on the main street, upsetting the buggy and smashing another rig.

I saw the team as I approached the corner; it was about 40 feet back and did not appear frightened then. Nor did I know of the runaway until I had ended my journey four blocks away. Now the horse owners want me to pay for repairing the rigs. I do not think I am at all to blame, but would like your opinion on the matter.—W. D. LEON.

So long as an automobile driver observes the usual rules of the road and is not going at an excessive rate of speed he has as much right on public highways as the driver of the horse. Even if the team became frightened at the automobile, and not the train, the team owner has no case. If a team should be frightened at the approach of a street car, train, bicycle or another team, the owner would not think of trying to collect damages. The automobile is a new condition, and in this progressive age people—and horses—must adapt themselves to such new conditions.

### WHERE THE MOTOR CYCLE FAILS

Chicago—Editor *MOTOR AGE*—I have read with interest your editorial in *MOTOR AGE* on motor cycles. You bring up one point especially that I would like to say a few words on—the reason it is not popular here. This is because manufacturers have been blind to the essential features of a motor cycle. They have given us engines that would not turn; that would stick up in cylinders, miss fire, in fact, act devilish. Every one who owned a motor cycle became a warning to others not to do likewise. I bought one and spent all of 1902 on it—always in the gutter endeavoring to make it go. When going, I was shaken into paralysis by its vibration. And so I got disgusted and bought an automobile. I have now bought a motor cycle for 1904 use. It has 4 horsepower, 21½-inch detachable tires, carries gasoline for 150 miles, weighs nearly 175 pounds, motor always starts, is so heavy it carries one like a Pullman over the roads, and will carry two passengers easily and speedily. With such an outfit my riding in 1904 will make other riders, as in 1902 I discouraged every one who saw me. Again, the appearance of my monster will be elegant and formidable, and the motor cycling clothes are now made handsome, appropriate and attractive, so that one is honored and admired. I have great faith in the motor cycle. There

is more actual fun in it than in two automobiles; and now that at least one manufacturer has got the machine right, and the accompanying incidents of apparel and supplies are right, we shall see many riders. This will produce the only thing now lacking—company for road runs. There will be no general success in any form of transportation unless there can be the accompanying jolly society and material for eventful rides. We are forming a motor cycle club this winter, and you will see a bunch of us in the spring and will witness our opening "endurance" contest, which will be to Wanagan and return.—BIRLEY B. AYERS.

The tendency of motor cycle construction is now toward heavier machines; just as heavier bicycles supplanted the lighter ones.

### BELIEVS IN FALL SHOWS

Reading, Pa.—Editor *MOTOR AGE*—The question for discussion is rather "Shall automobiles be designated by the number of the year or shall they be given some other distinguishing title," and the answer to this question would seem to be determined by the system of the maker rather than anything else. If a certain vehicle is made only in a certain year, it can hardly be called anything else than that year's rig. If, however, the maker, as many makers do, announces his styles in August or September, which styles are made and sold in the next 12 months, the year designation does not express the situation fully. While manufacturers cannot be constantly making changes but must turn out a certain model in large quantity if they are to reduce the cost, which is beneficial both to themselves and to their customers, there is no reason why they should not turn out this style of goods immediately after the close of the selling season for the preceding style, and if this is done they will distribute their business over a larger portion of the year than if they hold back their new model until the next selling season and then overwork to the detriment of quality in attempting to take fullest advantage of the business at hand. In the early bicycle days, opening day was March 1, later Washington's birthday, and still later shows were held in November, while wide awake manufacturers began showing their new models in August and September. Carriage dealers hold their annual convention in October or November and when automobile makers become wise they will undoubtedly do the same thing. Ever since September we have been receiving inquiries for spring delivery and many remarks to the effect that the writers intended buying but not until after the New York show. It would seem, therefore, to be nothing but rank foolishness to hold the show in the latter part of January and prevent business that should be done all fall and winter. Further, if the new models are announced in the fall, winter use is encouraged and we cannot do a better thing for the business or for the public at large than to secure the use of the automobile in the winter time, for it is then most needed, because horses are at their greatest disadvantage and the days are shorter.

Further, many people yet doubt the practicability of the motor vehicle and winter use

will remove this doubt quicker than any other one thing. When this subject was discussed some time ago, one prominent maker said a fall show would interfere with spring sales because people would wait for fall before buying. While this may have seemed a reasonable argument in favor of the show in the spring, as a matter of fact, it was just the reverse, for every maker and dealer wants business the year around instead of having two or three months in the spring when there is no time to get goods and take care of customers, and if the fall show will spread the business over the year instead of bunching it in the spring, it is certainly the thing to be desired. The Automobile Club of America set a splendid example when it held its first automobile shows in the fall, and this example should have been followed thereafter. The writer believes that much greater benefits would be derived from exhibitions if they were held early enough in the fall to secure pleasant weather and were held out of doors in some enclosure like a fair ground or automobile encampment. They could then be arranged to be seen in motion and the public at large would be more enthusiastic in the beautiful fall weather than they can possibly be in the chilly, stormy weather found in New York in January. If the show is to create enthusiasm among buyers, it should by all means be held out doors and not later than October and this disposition of the matter would destroy the objectionable feature of the yearly designation and do much to spread the business over the year both to the benefit of capital and labor, as the carriage business has been spread.—CHAS. E. DURYEA.

### TOURING YOSEMITE

Los Angeles, Cal.—Editor *MOTOR AGE*—In a recent issue of *MOTOR AGE* the statement was made that Major J. Fulmer, of Los Angeles, was the first automobilist to fully tour the Yosemite valley. Major Fulmer's trip was made in July. Prior to that time my wife and myself drove into the valley with a Wintour touring car, arriving at the Sentinel hotel May 3. The proprietor of the hotel will verify my assertion. The whole trip was an interesting one. We left Los Angeles April 8 for San Francisco, which we reached April 14. We left 'Frisco April 20, bound for Stockton, by way of Sacramento. Stockton was reached April 30 and on May 1 at noon we left it. We spent the night in a Chinese camp and the next day drove as far as Bowser cave. The Sentinel hotel, Yosemite, was easily reached the next day. With the exception of fording the stream at the foot of the Cascade falls the car pushed its way under its own power throughout the tour of the valley. In this instance the water was so high that it covered the floor of the car and wet the luggage stored in the tonneau. A team pulled us out of the stream.—A. N. JONES.

### SPEED IN NEW YORK

Buffalo, N. Y.—Editor *MOTOR AGE*—What is the legal speed limit for automobiles in country districts in New York state? We have had several arguments over the matter here.—G. E. SHAW.

The speed limit in New York state is 20 miles an hour on country roads, with certain exceptions which are enumerated in the synopsis of the present New York law published in *MOTOR AGE* of its issue of May 21, 1903.

## GOTHAM'S TRADE CENTER

### Nearly All the Metropolitan Concerns Forced To Enlarge—Plan Modern Structures for 1904

New York, Jan. 4.—The Winton Motor Carriage Co. is the latest to move to the new automobile row on upper Broadway. The company last week moved its eastern branch to Broadway and Fifty-fourth street, where a new building had been erected for its use. The new place has many labor saving devices, including a turntable on the garage floor, the invention of Sterling Elliott, former president of the League of American Wheelmen. This table rests on ball bearings and is a convenient thing for turning vehicles after they are brought into the place. On the floor above there is a traveling crane for shifting machines and parts from one part of the workshop to the other. In the corner building are the offices, including the headquarters of Percy Owen, eastern manager. There is room enough in the corner for an elevated platform and on this platform will be placed a 1904 Winton, surrounded by twenty-six electric lights to more fully show the beauty of its design and finish. The new building next door, which is used as a garage, workshop and storage place, gives the concern a plate glass frontage of 103 feet on Broadway and enables it to have a sign 120 feet long. Under the sidewalk in front of the building is a five-barrel gasoline tank, which is the first one installed under the new laws secured through the efforts of the New York Automobile Trade Association. In the basement of the garage building is a place for storing machines, together with a chauffeurs' room. On the first floor, where the turntable is located, is ample room for storing about thirty-five Winton cars, the only kind allowed in the building. On the next floor is a stock room and repair shop. Here are placed four pits in the floor, fitted with incandescent lights, while under each work bench is a closet for the parts of the machines being overhauled. An electric elevator facilitates the handling of cars. Manager Owen believes that when the place is in full operation it will be one of the finest homes for power-driven machines to be found in the city. He expects to have a formal opening within a few weeks.

A car load of 1904 Wintons is being anxiously awaited at the new branch. Prospective buyers have been informed that the cars should arrive some day this week.

Ever on the alert to strengthen their position in the automobile trade, Smith & Mabley have secured the big building at Eighty-third street and East river, where they will manufacture the Smith & Mabley Simplex and incidentally give more attention to the building of automobile bounties. The location is excellent for manufacturing purposes and the firm will have the additional advantage of being able to build boats and automobiles in the same building. New machinery and skilled workmen will give them one of the best equipped factories in this vicinity.

As a result of the good fellowship that reigns among the tradesmen in the vicinity of Broadway and Thirty-eighth street and in order to have a general meeting place to exchange ideas, there will be launched this week the Automobile Trade Club, with dues of \$10 a year and headquarters at some prominent

hotel. Knowing the value of exchanging ideas and feeling there should be some place where dealers could take their customers and friends to lunch, the idea of such a club has received almost universal endorsement. One of the hotels has offered a commodious meeting room for the club and, apart from giving a 25 per cent discount from its menu will give a luncheon each day at a special price, with special waiters for the service of club members.

P. H. Deming, the eastern manager of the White Sewing Machine Co., famed for his notable rides on big endurance runs, is about to take the most important trip of his life and one of which his countless friends will be glad to hear. It will be on the great road of matrimony and his companion, who will help him to keep on the proper course, is Miss Helen Smith, a young woman prominent in Detroit society. The pair will be given the word next week and then, as an incident to the greater trip, they will leave January 16 for a tour of Europe, in the redoubtable White steamer that Mr. Deming piloted so well on the Pittsburgh endurance run.

On Friday a party of newspaper men will leave New York for a visit to the factory in Cleveland, where Winton cars are made. The invitation comes from the Winton Motor Carriage Co. and Percy Owen, manager of the eastern branch, has been busy for the past few days arranging the details of the trip. Saturday the party will go through the big plant, returning to New York Sunday.

Excellent results are reported from the use of Edison batteries in two Adams' express wagons that have been in service in this city for some time. They furnished the first test of the invention of power-driven machines for commercial use and the Rainier Co., to which the batteries were loaned, is well pleased with the results. Paul Linseberger told a Motor Age representative that the batteries were expected to furnish much better service than any thing now in use, and that apart from weighing 25 per cent less; there was no cleaning, no equalizing, no broken jars and no broken battery straps. Wagons fitted with the Edison battery cover about 40 miles on a single charge. The Edison people decline to sell batteries as yet, but they are sending samples to the various makers of electric vehicles with a view of having them thoroughly tested.

By changing its constitution and by-laws at the meeting last week the New York Automobile Trade Association has made its meetings open to all members, who will have entire charge of the association's affairs, instead of having the work done by an executive committee. President Owen believes this will result in an increase of enthusiasm to the meetings and bring greater influence to bear on important matters.

Agencies for Georges Richard-Brasier cars have been established in Pittsburgh, San Francisco, Los Angeles, Boston, and Chicago. E. B. Gallaher says he is negotiating for a number of other agencies in prominent cities.

Frank Erclaud, of Spalding-Bidwell Co., and Mr. Joseph, of the Auto Import Co., returned from the Paris show on the Majestic last Friday. On the St. Louis, arriving Sunday were E. T. Birdsall, of the Standard Automobile Co.; C. R. Mabley, of Smith & Mabley, and Norris Mason, of the Societe Franco Américaine d'Automobiles; Sydney B. Bowman, of Bowman Automobile Co., and Alden L. McMurtry.

## COLORADO A GOOD FIELD

### Conditions There Ripe for Big Automobile Trade According to Geo. W. Wood—Hartford Notes

Hartford, Conn., Jan. 4.—George W. Wood, president and general manager of the Colorado Automobile Station of Denver, was a visitor to the city during the week, placing an order with the Electric Vehicle Co. for five large gasoline cars for immediate delivery and with more to follow in later months of the season. While in Hartford Mr. Wood talked entertainingly of automobilizing in the western country. "If the strike that is now in force among the mine workers of our state is settled soon it will have no bearing on the trade conditions. If, however, it is not soon fixed up I fear that it will have a demoralizing effect upon the healthy condition of trade in the state. Just now we haven't felt any difference, but if the struggle is long drawn out and continued for any great length of time, I cannot but feel that there will be hardships in many lines of trade, and especially in our business. But I think that the cooler heads among both elements in the controversy will win out, and that the struggle will soon be over. That seemed to be the sentiment when I left home.

"There are 400 automobiles or thereabouts in Denver, or more than there are in all the state besides. Our experience was first with steam, then with electric, and now with gasoline. The steam vehicles were not popular after a year or two until last year, when the Stanley people sold some fifty cars. Inexperience counted in ruining many batteries in our section but I have picked up a good electrician and propose building a garage in the residence section for the exclusive care of electric vehicles, and I think this will cause a return of favor of this type of car. I start in with a large number of vehicles and think that the garage in this residence section will be a popular institution.

"We have had some trouble with gasoline vehicles in our section that the people of the east are not heir to. We are some 5,200 feet above the sea level and the air is thinner. It does not contain so much oxygen. We therefore have some little trouble with mixtures. This is not original with any one make of car but is experienced by all vehicles of the gasoline type. This year, however, the manufacturers of carburetors have paid attention to our conditions and we think they have done much to solve the question.

"No, the roads of Colorado are not so hilly as the easterners imagine. Seven and 8 per cent grades are common enough, but so they are in our eastern cities. I say our because I come from Pittsburgh. It would actually take some time to find a 20 per cent grade. Of course there are such, but one doesn't strike them any more often than one would in making a tour of this eastern country. There are, however, quite a number of small grades. The need in Colorado is for a high powered car of light weight. The greatest amount of strength and light weight, coupled with good construction, is what we want.

"A great part of the state of Colorado offers a good field for the sale of gas cars and this is the field that I intend working this year. The managers of mines are men with large salaries, little opportunity for pleasure, and such men are generally possessed of a

love of nature and a touch of mechanical genius. The automobile offers them a fine plaything and when one is demonstrated to have hill climbing ability and general capacity they will purchase. The expensive touring cars are what they are after, too. To my mind there will be a great number of cars sold among these people during the season to come."

Mr. Wood says that there is little opportunity to sell high class vehicles of the brougham order. He did purchase one of these carriages, a Woods electric, for his own use, and there were several who thought seriously of purchasing, but afterwards decided not to. Women are large owners of carriages, particularly electric runabouts and surreys, and many of them are clever in the role of chauffeur.

The quick shift of the bicycle men to the automobile game was again brought home to Hartford people when Henshaw, who formerly rode motor tandem for records with Hedstrom, visited the city in the interest of the Thomas car during the week, seeking an agency. The Olds field force was also in town during the week, and it is thought a new agency connection will be made, since S. A. Miner, who last year handled the Olds, has taken on the Knox.

John Lights, foreman of Brown, Thomson & Co.'s automobile department, has fixed up a delivery wagon for the firm from an old delivery wagon body taken from a Milwaukee steam wagon and using the chassis of W. P. Plimpton's Knox car.

Efforts are being made to sell the fire department an automobile, for the use of Chief Krug, by several agents and as a result the fire commissioners, six in number, are being taken to ride each afternoon. Former Chief Eaton, recently retired after more than 50 years of service, was opposed to automobiles and preferred to drive his faithful "old whitey," though he told the commissioners that he would go to fire with a bull, if they demanded it. That closed the incident. Chief Krug, however, is a crank on automobiles, as he puts it, and the commissioners cannot purchase one any too quick to suit him.

George M. Brown, who owns a number of cars, has purchased a new four-cylinder 40-horsepower Apperson Bros. car. This will be the Boston show and will then be delivered to Mr. Brown, who will use it in tours of New England and about the White Mountain country another year. Mr. Brown used the two-cylinder Apperson car in touring the White Mountains last year, in which tour he made country where an automobile had never been seen, and where he was called upon at times to camp in the open air over night with his party. Mr. Brown now owns a Haynes-Apperson runabout, an Apperson touring car, a Union runabout and a Columbia electric runabout. He has also purchased several cars for his brother-in-law, Dr. Lyman, of New York, and has been one of the largest individual buyers of automobiles for private use. For two weeks he has been at the Kokomo, Ind., factory of both the Apperson Bros. and the Haynes-Apperson Co.

#### CLUB REDUCES DUES

In order to encourage early applications for membership, the Chicago Automobile Club offers to receive new members during the month of January on payment of \$25, which amount will cover both the initiation fee and the dues for the first six months.

## WINTER DEMONSTRATING

### Buffalo Makers Give a Motor Age Man Fast Rides Through Blizzards—The Tale of Woe

Buffalo, N. Y., Jan. 2.—When an eastern tenderfoot member of the Motor Age staff struck Bisonville this morning he thought he had run up against a pretty fair sample of the winter weather article. What looked to him to be a wind and snow blizzard seemed to be raging. At the Thomas factory and down at the Pierce office they didn't seem to think so. Mr. Thomas, good, hospitable Thomas, insisted on bundling the tenderfoot into one of the new three-cylinder cars, just to show him how well it could run. The wind blew a gale and blinded the luckless scribe with snow. The irrepressible juggernaut plunged through the drifts and tore through the snow at 30 miles an hour as though it were skimming over a park boulevard. A great respect for the power and speed of the new Thomas and two frost bitten ears were the net results to the tenderfoot of his run from the Thomas to the Pierce place.

"Oh; that's nothing!" cried Percy Pierce, as he opened the window for some snow and rubbed the visitor's ears with it.

"That's nothing," echoed Fred Nickerson. "Come out and take a ride with us in the Arrow. I pulled through from Binghamton the other day in a bigger snow storm than this."

"That's nothing," put in Mr. Clifton. "Go out with the boys for a little ride."

Once more the Motor Age man faced the blizzard and became a party to speed law breaking, trolley car racing and foot passenger dodging. Those Pierce and Thomas people don't know it's winter. Really, they don't. They say automobile beats sleighing. Perhaps it does when one is used to it. The Motor Age tenderfoot isn't.

Fred Nickerson, who drove the Pierce pilot car in the endurance race, had a thing or two to tell about the recent snow bucking expedition he and F. S. Day had had. The two made a run in "Arrow No. 14" from Binghamton to Buffalo, a distance of 226 miles on the endurance race route, with 14 miles of detour added, in 2 days and a half. This is Nickerson's story in brief:

"There was about 16 inches of snow when we left Binghamton at noon on December 16," said he, "yet we covered the first 28 miles in an hour and ten minutes. Elmira, 63 miles, was reached that night. We got to Bath, 40 miles, at noon the next day. At Cohocton, 16 miles out, where there was so much trouble during the endurance run storm, the drifts and snow were so deep—6 feet in places—that we turned to the right and climbed the mountain, which is 1,780 feet high. At Wayland Junction we encountered snow 6 feet deep. It took us 3 hours to make the 2 miles into town. We had four men shoveling while we two pushed. We would back and then go into the drifts, after the manner of a railroad snow plow.

"It was still storming the third day. The snow was so deep that it took us an hour to go 7 miles down hill into Danville. Here it stopped snowing. At Genesee, however, it began to storm again. Mr. Day had to constantly get off and shovel a path. At Corin he fell from the step, where he was standing, in a faint. It took me 20 minutes to bring

him to. I tell you I was pretty badly scared. We finally got into Buffalo at 5 o'clock the third afternoon. Not a thing went wrong with the machinery. The people had not forgotten the endurance run. When they saw us they concluded some new kind of winter test was in progress and asked us how many more were coming."

Out at the Thomas factory most of the talk was of the 1904 three-cylinder car.

After a look at the new chassis and after the demonstrating car's easy run through the snow the enthusiasm of Mr. Thomas and Mr. Schultz over next year's model was readily understood. Another Motor Age man had been a previous visitor and had gathered its data.

Motor cycles will receive much attention at the hands of the company the coming year. Edwin L. Thomas, a son of E. R. Thomas, who has been studying the two-wheel motor problem for 3 years in Europe and this country, is now in charge of this branch of the business. He had drawings of the 1904 model to show.

Mr. Thomas is building a 24-horsepower auto boat and expects to make this a notable branch of his manufacturing business.

#### BOSTON TRADE DOINGS

Boston, Jan. 2.—Every inch of available space has been disposed of by Manager Campbell for the automobile show of the Boston Automobile Dealers' Association, to be held in Symphony hall next March. Manager Campbell says the show will be more of an international affair than ever and will prove of considerable value in educating the Bostonians to what is best in the automobile world. The show will also make it possible for the local followers of automobiles to see the latest creations in motor vehicles without having to travel to the New York show.

Charles E. Fay, formerly Philadelphia manager for the Hartford Rubber Co., has severed his connection with that concern and is now located with Harry Fiedelick at the Winton branch in Boston. Mr. Fay is well known to the Boston trade, having been engaged in business in this city for many years. The first 1904 Wintons arrived during the week and were placed on exhibition on the salesroom floor of the Winton garage.

A. E. Morrison is full of business booking orders for the four-cylinder Peerless and also is finishing the preliminary arrangements for his new garage, which is to be constructed on Ferdinand street.

George H. Lowe, of the White company, has his eyes on a fine piece of land on Boylston street, near the Massachusetts club house, which he is endeavoring to secure as the site of his new garage.

#### RECENT INCORPORATIONS

Owners' Automobile Co., St. Louis, Mo.; capital, stock, \$2,000. Incorporators, Horace A. Davis, William C. Woods, George L. M. Melle.

Gato City Motor Car Co., Omaha, Neb.; capital, \$10,000. Incorporators, J. E. Baker, L. H. Ayer and E. R. Baker. To manufacture automobiles.

The Rambler Automobile Co., of Hattboro, Pa.; capital, \$5,000.

Lee Automobile Co., of Portland, Ore.; capital, \$1,000. Incorporators, Don M. Lee, Charles G. Briggs, Howard H. Holland.

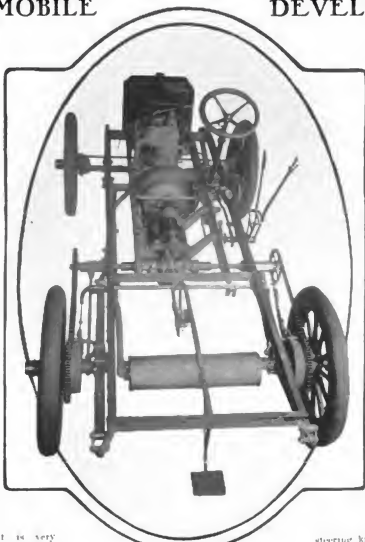


Having entered the motor industry as maker of motor bicycles, it was natural that the first automobile built by the E. H. Thomas Motor Co., of Buffalo, N. Y., should be a small, light machine, having much of bicycle construction in its make-up. Then came a light runabout with the popular single-cylinder, horizontal motor under the body of the car; and then the Thomas with which most people are familiar, the single-cylinder, light tonneau car of last season. The latter made a hit at the shows last year on account of combining runabout simplicity with greater strength, touring car lines and greater carrying capacity.

But while it was, during 1903, generally known as the maker of such cars, the company itself had a greater ambition tucked up its sleeve, and was quietly working out plans for a car of much greater pretension. A careful survey of the industry was made, and the result, coupled with the company's own experience, brought about the designing of a car which the maker feels sure is of a style and pattern that will be most popular this year—an ample powered, light car, with multiple cylinder motor in front under a bonnet in a mode. It is Model

22, surnamed the "Flyer." It is very much larger than the earlier cars, and also is a radical departure from the previous Thomas cars, but here and there in its construction are noticeable the evidences of the company's experience in the manufacture of other cars, and even are seen traces of things constructional learned in motor cycle building. The latter class of construction, incidentally, is not bad training for automobile manufacture, for the building of a good motor bicycle brings out many methods and processes of refinement which might be overlooked in the exclusive production of machines of a larger growth, in which a pound of metal or a foot-pound of power wasted does not matter so much.

The distinctive feature of the car is its



MOTOR AXE

The Thomas Chassis

three-cylinder, upright motor; not new, of course, but almost unique in American cars of this class, and previously most advocated in America by that prince of opinionists, Charles E. Duryea. The adoption of this kind of motor is not due to a desire to be peculiar, however. Almost a year ago, when the designing department was first instructed to cast about for ideas for this car to be, the selection of a general type of gasoline motor was laid out as its first work. A direct study of the question of motor cylinders, together with notation of the fact that several of the best and longest experienced builders of Europe, both British and continental, had adopted the three-cylinder motor with plain success, decided the matter, and the car began to exist. As a foremost representative of this type of construction in America its performance during 1904 ought to be watched with interest for this, if for no other reason.

Between the considerations of motor distinction and chassis construction, factor by factor, there appears as a second general characteristic, the constructional aim throughout to increase power and reduce weight. The result is a car whose weight is 2,000 pounds and whose motor is rated at 24 fully developed horsepower.

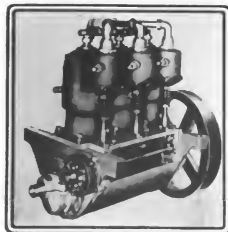
The main frame of the car is a compound affair, plainly the result of an endeavor to secure the advantages of several styles of construction. In a straight side view it closely resembles a pressed steel frame, rivet heads

only distinguishing it. Structurally it embraces rolled plate steel and angle steel. Each side bar comprises a 10-gauge flat steel plate, 3 inches wide in the center and tapering to 1½ inches wide at each end, where it is curved downward to form the spring support, its curve corresponding to that of the spring, and its end being provided with a forged spring hanger. To the inside of this plate are riveted two 1½-inch angle steel bars, facing each other so that the general section of the composite structure is that of a channel iron. There are three main cross bars; one across each end, of course, and one slightly back of the middle of the frame. Between this bar and the front bar extend two longitudinal 2½ by 1½-inch angle bars that form the sub frame upon which is placed the motor and transmission gear case. Two short cross bars extending respectively from the center of each side of the sub frame to the main side bars and a longitudinal bar from the middle to the rear cross bar, complete the frame structure. The frame is closely riveted and all corners are structurally braced.

Both the front and rear axles are of steel tubing, 2½ inches in diameter and of 8 gauge. The

steering knuckles are of the jaw pattern and are heavy and with carefully executed bearings. The steering connections are all extraordinarily heavy and rigid. All the wheels run on wide Timken roller bearings of 2½-inch outer and 2¼-inch inner diameters, respectively. The wheels are of the wood, artillery pattern, 32 inches in diameter and fitted with 4-inch double tube, detachable tires. The wheel base is 84 inches and the tread 56½ inches.

The motor is of the aluminum alloy crank case style with individual cylinders bolted to it. In each, the cylinder and head are integral. The water space between the cylinder wall proper and the outer, or jacket wall, is of more than ordinary width. The inlet and exhaust valves are on the same side of the cylinder, the inlet valve being atmospherically



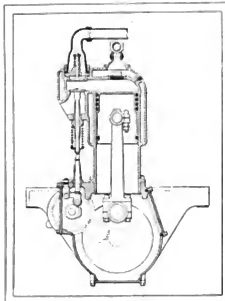
The Thomas Motor

MOTOR AXE



MOTOR AXE

Thomas Clutch Interlocking System



Section of Thomas Motor

operated and being directly above and in line with the exhaust valve, which, of course, is operated by the usual cam and lifter device, the cam shaft and lifter rod rollers of which are enclosed in the crank case. It is said that great care is exercised in the fitting of the inlet valves and springs, and that each valve, before being inserted, is tested to open its regulation lift of 3-16-inch under exactly 1 pound pressure.

The sparking plug screws into the side of the cylinders, so that its points are directly between the inlet and exhaust valves, and consequently in a good path for self-scavenging by virtue of the rush past it of the gases. A single pipe leads upward from the carburetor and branches into a 3-way horizontal Y over the top of the motor, one branch extending to each inlet. The exhaust piping is on the other—left—side of the motor. The pipe from the foremost cylinder extends obliquely downward and then directly back to the muffler, while the lead from the other cylinders extend substantially straight down to this main pipe.

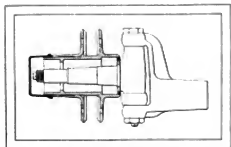
The cylinder bore is  $4\frac{1}{2}$  inches and the stroke  $5\frac{1}{2}$  inches. The stated 24 horsepower is said to be taken at a motor speed of from 900 to 950 revolutions per minute.

The motor has four crank shaft bearings, the outer two of which are lubricated by chain oilers, while the inner ones and the piston and connecting rod bearings are lubricated by the splash system. The crank shaft is a forging. The crank pins are hollow, of large diameter and with large fillets in the corners. The connecting rods are of cast steel, with bronze and babbit bearings. Each piston has five rings, four as usually disposed at the upper end, and the extra ring at the bottom to assist in balancing the piston and to act as a piston oil retainer.

The water circulation is by means of a directly gear driven, gear pump. It passes from the cylinder heads to the radiator, from the radiator to the pump and from the pump to the lower portion of the water jackets. The radiator draft is accelerated by a fan, belt driven from the motor shaft. The water system is fitted with a small by-pass through which water may be turned to circulate around the force feed lubricator on the dashboard. This is a convenience for cold weather, to prevent the oil from becoming stiff. An ordinary cock allows this supplementary channel to be

closed or opened at will. The fly wheel, in addition to the usual key fastening, is provided with six flange bolts, which render its connection with the motor crank shaft peculiarly rigid.

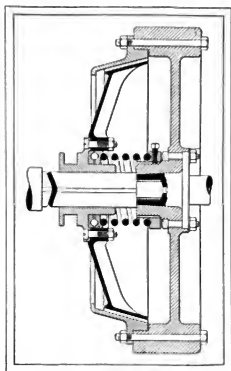
In the construction of the motor cylinders the experience and practices of the Thomas company in motor bicycle manufacture crop out. It is almost necessary to high efficiency in a small, high-speed, air-cooled bicycle motor that the working parts be ground and lapped. This process is carried out in the automobile motor cylinders and all running parts; even the piston rings are both ground and lapped. The whole finishing of the cylinder castings is a systematic process. Each cylinder is bored, turned and faced, and is then placed in a universal jig which allows the drilling of all the holes without its removal or change of position, the jig being made so that it may be shifted from one position to another to allow the drilling of different holes. The machining of the cylinder extends even to the upper face of the bolt flange by which it is held to the crank case, this being faced so that the bolt heads may have true seats and thus be rid of any tendency to draw the cylinder out of alignment.



MOTOR AGE

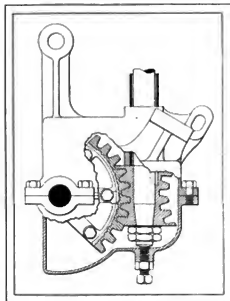
Thomas Front Wheel Hub

The transmission gear is of the sliding gear variety, with a direct drive on the high speed that is not only direct but direct without the running of the idler gears. It furnishes three forward speeds and a reverse drive. The clutch is contained within the fly wheel, and avoid-



MOTOR AGE

The Thomas Fly Wheel and Clutch



MOTOR AGE

The Thomas Steering Gear

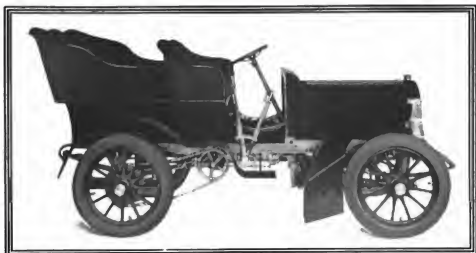
ance of thrust is the chief claim made for it. Between the clutch and the transmission gear is a universal joint, so that the action of the clutch is entirely independent of the gear and throws no strain upon it.

The main shaft of the transmission set is the usual squared shaft, driven by a sliding jaw clutch from the stub shaft extension of the clutch shaft. This extension shaft carries the spur pinion which drives the secondary gear shaft, upon which are the different spur gears to furnish the two low speeds, and the reverse drive through the usual idler pinion. By the action of a small gear sector and spur gear rack, co-operating with the sliding gear shifter, when the hub that carries the two sliding gears is brought into contact with the jaw clutch member of the driving shaft, the first spur gear on the secondary shaft—which meshes with this gear to furnish the main drive for the low and reverse speeds—is drawn out of engagement with the pinion of the driving shaft and the main shaft runs directly with the motor shaft, all gears being out of mesh.

The drive from the main shaft is by bevel pinion and gear to a cross counter shaft from which the final drive is taken by double side chains, these being  $\frac{1}{2}$ -inch Diamond roller chains of 1-inch pitch. The end bearings of the transmission gear set are lubricated by chain oilers, while the inner bearings and the gears and other working parts are oiled by splash, the aluminum gear case being oil and dust tight. It is fitted with a hand hole on top, so that the gears may be inspected without removing the entire upper half of the casing. The cross counter shaft is fitted with universal joints, and runs on Hyatt roller bearings  $2\frac{1}{4}$  inches in diameter and  $7\frac{1}{2}$  inches long. The bevel gears are provided with ball thrust bearings to take care of side stress. The spur gears are of No. 6 pitch and of 1-inch face, while the bevel gears are of  $1\frac{1}{2}$ -inch face.

The final drive is so arranged that the chain line on each side is within the scope of the  $9\frac{1}{2}$ -inch roller bearings in each rear wheel. This feature is another unmistakable evidence of motor cycle building, in which it is recognized good practice to get lines of power application within bearing centers.

The brake system comprises four double acting brakes, two on the counter shaft and



MOTOR AGE

The Thomas Touring Car

one on each rear wheel. The counter shaft brakes are operated by a pedal and their application disengages the clutch simultaneously. A further interlocking system provides that the application of the emergency brake side lever applies all four brakes and disengages the clutch. The clutch is individually operated by a pedal and a still further interlocking system, in connection with the gear shifting lever, prevents the engagement of the clutch until the gears are properly in mesh, even though the foot be lifted off the clutch pedal. The speed ratios of transmission, determined upon the basis of final drive of a twenty-two to a forty-tooth sprocket, are: Direct drive, thirty to eleven; middle speed, fifty to eleven; low speed, 100 to eleven; reverse, 250 to eleven. A speed of 40 miles an hour would by this reduction be given at a motor speed of about 1,600 revolutions.

The steering gear is of the Hoadly pattern of four-lead worm and gear sector, furnishing a rotary reduction of two to one. It is, of course, enclosed, and is provided with a double take-up for adjusting in both directions. The main gasoline reservoir, a tank of 15 gallons capacity, is placed under the seat. This supplies a small tank in front of the dashboard, from which the supply is direct to the carburetor. The muffler is large and is provided with a "cut-out."

In body design the car is in keeping with its construction. The bonnet is of the double-belt, square style, while the dash is of the new overhanging variety, with curved top and sides. The tonneau is wide and high and has roomy seats for three persons. All of the upholstery is deep and comfortable. The finish is not radical, the chief consideration being said to be excellence of execution.

#### WRIDGEWAY'S NEW CARBURETOR

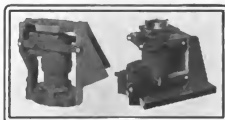
Charles G. Wridgway, manager of Hunker Bros. Co.'s New York branch, has designed a carburetor of the float feed spraying type which has many good points to commend it. The float chamber and mixing chamber are cast in a single piece. The sheet metal float acts on the gasoline needle valve through the intermediary of two balance levers, thus allowing the valve to close downwardly. The gasoline supply pipe connects to the float chamber at the bottom by means of a union with conical seat.

Within the cylindrical mixing chamber is arranged a throttle valve. The main air inlet to the mixing chamber is in the cylinder wall at the side, and the gas outlet on top, directly

above the spray nozzle. The throttle valve operates both the main air inlet and the gas outlet simultaneously. The throttle valve has a stem passing through the head plate of the



Grinding a Cylinder



MOTOR AGE

Jigs for Finishing Cylinder

mixing chamber, to which is pinned a lever arm for operating it. An auxiliary air inlet is formed in the head of the mixing chamber. Both the head plate of the chamber and the

head of the drum have openings in them and these openings can be more or less obtained by means of the perforated plate to which is secured the lever arm. If for any position of the throttle valve the mixture should not be of the correct proportions it can be corrected by means of the auxiliary air valve.

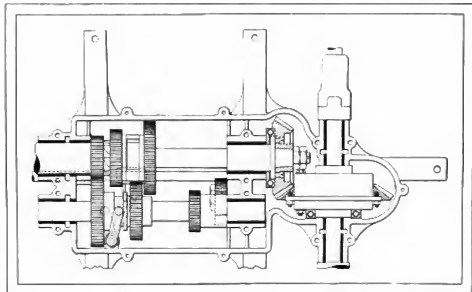
Mr. Wridgway intends to cast a jacket around the mixing chamber in the future, through which the cooling water is to be circulated, to facilitate vaporization of the gasoline.

#### THE DAWSON TOURING CAR

Chicago, home of freaks in automobile construction, this year offers an automobile that is by no means a freak, but a simple car of the light touring order. This is the Dawson, made by the J. H. Dawson Machinery Co., Canal and Washington streets. The car is of medium weight and power and is not large, but it is fitted with wide high back seats, and a tonneau of a depth unusual in cars of the size. In its construction the company has not attempted to secure the greatest possible speed, but instead has worked along the lines of comfort and simplicity, the latter both in construction and operation. It was built for the general public, for the persons who do not care to know any more than is necessary about the mechanical side of automobilism.

The running gear is of angle steel. Its principal point of distinction is the bracing of the corners with triangular plates of ample dimensions. The frame is supported by semi-elliptical springs and the wheels run on roller bearings. Both axles are strong. The rear axle is of the divided live pattern, fitted with a spur gear differential. The distance or radius rods for determining the rear axle position are out of the ordinary arrangement. They extend from the axle fitting to the hanger for the front end of the rear spring, instead of to a special hanger further forward on the frame, as is customary. This construction allows the rod to be short and of simple adjustment.

The motor is of the double-cylinder upright pattern, rated at 15 horsepower. It has an aluminum alloy crank case and individually cast cylinders. All of the valves are on one side, and all are mechanically operated from the same cam shaft. The spark plugs are on the top of the heads, above the respective in-



MOTOR AGE

The Thomas Transmission Gear

let valves. The lubrication is by the splash system, with the oil supply from a gravity sight feed on the dash.

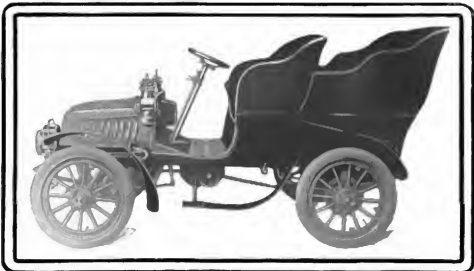
The motor, instead of being placed with the crank shaft longitudinally of the vehicle, is placed crosswise and is connected to the transmission gear by a chain, the shaft of the transmission gear being parallel with that of the motor.

The transmission gear, which furnishes two speeds ahead and a reverse drive, is simple and peculiar to the car. It comprises a main shaft, upon which is a sleeve and two face clutches. The projecting end of the shaft carries the sprocket over which runs the drive chain from the motor, while the sleeve carries a final drive sprocket for the chain running to the sprocket on the rear axle. The secondary shaft carries the low speed reducing spur gears, and a sliding pinion adapted to mesh with an idler to furnish the reverse. On the main shaft is a spur gear which normally meshes with this sliding pinion, while on the other end of the shafts are gears connecting the secondary shaft back to the main shaft sleeve. When the sliding pinion is in mesh with the main shaft gear, and the low speed clutch is thrown into engagement, the drive is through the secondary shaft. When the same clutch is in engagement, but the sliding gear is moved to engage the idler pinion instead of the main gear, the reverse drive is in effect. The high gear is obtained through the other clutch, which couples the shaft and sleeve to rotate together, giving a direct high speed drive.

There are no side levers. The speed changes are operated by means of a hand lever on the steering wheel pillar, while the sliding gear to give the reverse drive is brought into that driving position through a heel pedal. There is a brake on the transmission gear and one on each rear wheel. Both sets of brakes are operated by pedals. The only other controlling mediums are the small handles for the regulation of the throttle and spark lead. These are on the steering wheel pillar.

The gasoline tank is under the driver's seat, being supported by a light frame extending from the rear side of the sub frame to the cross rod actuating the rear wheel brakes. The water circulation system is of the customary pump forced character, and includes the recently introduced Long radiator, peculiar because of its crimped, continuous spiral rib.

The whole car is strongly and well made and is free from delicate mechanism. It ought



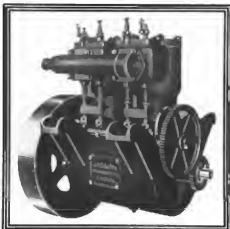
MOTOR AGE

The Dawson Touring Car

to be able to stand up well under rough usage. The finish and equipment are first-class.

#### A SELF-STARTING MOTOR

A gasoline engine that can be started by simply pressing a button is a new invention for which Edward Rathbun, of Toledo, O., has applied for a patent. The inventor made



MOTOR AGE

The Dawson Motor

his experimental engine in the shops of the S. M. Jones Co., and Mayor Jones has a half interest in the invention. The details of the construction of the engine will not be made

public until the patent is granted, but some information has been given out to show what it will do. The engine is a vertical two-cylinder, and the principal point is that it is self-starting. It is designed primarily for automobiles, and can, after having once been started in the morning in the usual manner, be shut down as many times as necessary and started again by simply pressing a button. In one of the cylinders there is always a charge ready for ignition or explosion, and the dead center is always avoided.

While the engine cannot stand for an unlimited time and then be started by the button, as the charge escapes after a certain time, it is claimed that for all practical purposes, such as a day's work, it can be started by pressing the button.

Plans for a factory now being discussed, and it is probable that delivery wagons equipped with the new engine will be built.

#### TRADE BRIEFS

The Porter Battery Co., of Waukegan, Ill., is removing its plant in Chicago, where it will have larger and better facilities.

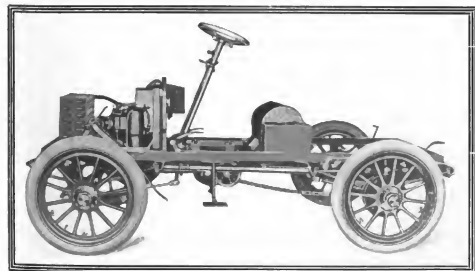
The Queen City Automobile Exchange Co., of Buffalo, N. Y., will handle the White touring car and the Orient Buckboard this year.

The Dullman & Cooper Supply Co., of Fond du Lac, Wis., has made one touring car and considers it so good that more will be manufactured.

The Hendee Mfg. Co., of Springfield, Mass., will manufacture both the Indian bicycle and the Indian motorcycle, 1904 models, and can make immediate deliveries.

The automobile dealers of Minneapolis, Minn., will have an exhibit following the horse show January 18 and 19. Prizes will be awarded for the best cars of different styles, and also for the best exhibition of operation. The show will be held on Nicollet avenue and will be in charge of R. F. Jones.

Githens Bros., of Chicago, have purchased the Oldsmobile Co., of Wisconsin, and will assume charge of the store in Milwaukee about the first of February. It has not yet been decided who will have charge of the Milwaukee office, but a local man will probably be appointed. The Githens brothers, Walter L. and Herbert, now own practically all of the stock of the Githens Bros. Co., and the management of the Chicago and Milwaukee offices will be directly under their control.



MOTOR AGE

Chassis of the Dawson Car

# MOTOR PATENTS REVIEWED

## DETACHABLE CLOSED TOP

Letters patent No. 747,937, dated December 29—Henry L. Call, of Chicago—Claim 6—The combination with an open vehicle comprising running gear, springs and an open body mounted thereon, of a closed top having an open bottom and comprising top, front, rear and side walls, a frame for supporting the closed top comprising portions extending beneath the vehicle springs and integral portions extending laterally beyond the sides of the body of the vehicle, means engaging the vehicle springs for securing said frame thereto, and means for removably securing the side walls of said closed top to the portions of said frame which project beyond the sides of the vehicle body.

## MOTOR COOLING SYSTEM

Letters patent No. 748,001, dated December 29—George McCadden, of St. Cloud, Minn.—Claim 4—The combination with the cylinder of an engine and its convex crank casing, a short tubular part mounted upon the convex portion of said casing and communicating with the interior thereof, a hood embracing two sides of, and mounted at an angle to said tubular part, and arranged to direct currents of air upwardly upon the cylinder, and oil downwardly, and a device for collecting lubricant disposed below the hood and outwardly of the casing.

## IGNITION DEVICE

Letters patent No. 748,011, dated December 29—Wolcott Remington, of Stamford, Conn., assignor to the International Power Vehicle Co., of Stamford, Conn.—Claim 3—In an explosive engine, the combination with an engine cylinder, having an induction port therein, a piston head uncovering the said port, and carrying a deflecting flange to one side of its center and opposite the said port, a head upon the cylinder having a recess therein with a rounded bottom, located above the flange, a firing tube opening into a side wall of the recess and extending therefrom at an angle to the line joining the recess and flange, a hot surface contained in the firing tube, and means for moving the said surface axially in the said tube.

## TWO-CYCLE MOTOR

Letters patent No. 748,029, dated December 29—Herbert G. Underwood, of Stamford, Conn., assignor to the International Power Vehicle Co., of Stamford, Conn.—Claim—In an explosive engine, the combination with an explosion cylinder, having a closed forward end and an explosion head, a piston head in the cylinder, a valve controlled air induction port at the rear end of the cylinder, a passage therefrom to the forward end and a piston controlled air passage connecting the rear and of the first passage and the cylinder, and extending around the piston head.

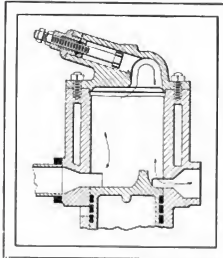
## ROTARY VALVE MOTOR

Letters patent No. 748,045, dated December 29—William M. Britton, of Columbus, O.—Claim 1—In an internal combustion engine the combination with a plurality of power cylinders, each of said power cylinders having an exhaust outlet and combustion chamber communicating therewith, a crank shaft, pistons in

said cylinders connected with the cranks of said shaft, of hollow rotary valves adapted to communicate at each revolution with the interiors of the combustion chambers, a rotary shaft operating said hollow valves, cams on said shaft, exhaust valves for the power cylinders, fulcrumed exhaust valve operating levers having their outer ends adapted to contact with said shaft cams and their rear ends adapted to impart opening movements to said exhaust valves, means for supplying air and gasoline under pressure to said hollow valves and means for igniting the combined gasoline and air within said combustion chambers.

## ELECTRIC CAR DRIVE

Letters patent No. 748,015, dated December 29—Charles E. Roberts, of Oak Park, Ill.—Claim 1—The automobile provided with a mo-



tor rigidly supported from the axle, a pinion for actuating the wheel also rigidly supported from the axle, and a single power transmitting device of an elastic nature connecting the motor shaft with said pinion.

## TUBULAR MUFFLER

Letters patent No. 748,157, dated December 29—Samuel Bouton, of Salem, Mass.—Claim 4—In a noise muffler, a series of concentric tubes of different diameters, two heads to which the opposite ends of said tubes are respectively fastened, one of said heads provided

with an inlet orifice opening into one end of the innermost tube of said series of tubes, the other of said heads provided with outlet orifices opening out of the annular space adjacent to the outermost tube of said series of tubes, the inner tubes of said series provided with orifices opening alternately from one into the other at opposite ends thereof, and a series of truncated cones located within said innermost tube, the apex of said truncated cones pointing toward said inlet orifice.

## CONTROLLING GEAR

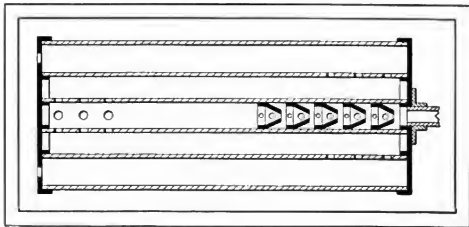
Letters patent No. 748,252, dated December 29—Sven J. Anderson, of Winchester, Mass.—Claim 2—In a vehicle, the combination of a controlling post having a rotary or twisting controlling movement and a universal swinging movement, frictional locking means in continuous connection therewith for supporting said post against said universal movement, and connections for transmitting the rotary movement of said post to the vehicle controlling mechanism.

## DRIVE CHAIN COVER

Letters patent No. 748,275, dated December 29—Stuart E. Freeman, of St. Louis, Mo.—Claim 1—A motor vehicle comprising an axle operatively connected to a motor to be driven thereby, a casing for said axle arranged to act as a beam and constituting part of the frame of the running gear, said vehicle comprising a member extending from the axle casing to the motor shaft or frame for positioning said shaft, and said member being arranged to increase the mechanism for transmitting power from said motor to said axle.

## SLIDING GEAR

Letters patent No. 248,334, dated December 29—Vincent G. Apple, of Dayton, O.—Claim 1—In a device of this character a driving shaft, a shaft element to be driven, a bodily-stationary primary driven shaft element interposed between the driving shaft and the shaft element to be driven, variable gearing connections between the said primary shaft element and the shaft element to be driven, operating means for varying said gearing connections, a clutch member carried by the driving shaft, a bodily movable clutch member arranged to coact therewith, means connecting said movable clutch member and the primary shaft element for rotation, and means interposed between the movable clutch member and the operating means for automatically disconnecting said clutch members during a movement of said operating means to vary the geared relations of the primary shaft element and the shaft element to be driven.



Letters Patent No. 748,157





The Indiana Automobile Club has increased its capital stock from \$25,000 to \$30,000.

\*\*\*

The Cortland Automobile Co., of Syracuse, N. Y., has been purchased by Arthur W. Davis, of Ithaca.

\*\*\*

The first motor cycle club of Berlin was formed December 16 and has about forty members.

\*\*\*

The George N. Pierce Co. is reported to be building a 55-horsepower racer for next season's track circuit.

\*\*\*

Kenneth A. Skinner, the American de Dion agent, arrived on the Kronprinz Wilhelm last week from his visit to the Paris show.

\*\*\*

A French woman motor cycle driver has issued a challenge to all French motor cycle drivers for a race over a distance of about 31 miles.

\*\*\*

C. S. Partridge had a formal opening last week of the new shop room of the Standard Automobile Co. on West Thirty-eighth street, New York.

\*\*\*

The Automobile Club of America gave a holiday smoker last week, whose main attraction was a high class professional vaudeville entertainment.

\*\*\*

It is said that a Georges Richard car of high power and speed is to be shipped to this country for competition in the Florida races and on the track circuit next season.

\*\*\*

At the annual meeting of various Belgian motor bicycle clubs, held in Brussels, it was officially announced that the total membership of the clubs had reached the 950 mark.

\*\*\*

All the steam fire engines presently used by the fire department of Frankfurt-on-the-Main, Germany, will be replaced with gasoline engines, which means an outlay of \$15,000.

\*\*\*

M. de Brou, business manager of the de Dietrich factory, is the first soldier in the French army to complete the entire period of his yearly 28 days of service as an automobilist.

\*\*\*

An omnibus service has been inaugurated between Leipzig and Marneburg, Germany, a distance of 16 miles. Each of two busses has a 12-horsepower double-cylinder motor and seats twelve passengers. The route is generally covered in 90 minutes, although there are fifteen stops. The fares vary from 5 to 25 cents, the latter being the charge for the entire distance.

A reduction of 33 per cent is made on children's fares and a similar concession is granted workmen, provided they buy twelve tickets at a time. Each bus covers the distance eight times during the day.

\*\*\*

A German chauffeur was fined \$15 each in three cases. He appealed and was then sentenced to 2 weeks in jail. Before this sentence was finished the chief of police ordered his license revoked for one year.

\*\*\*

A number of Belgian automobile manufacturers have complained to the government because the Dutch customs authorities refuse to let Belgian commercial cars cross the frontier, because they claim they spoil the roads.

\*\*\*

Under the title of "A Little History," Thomas B. Jeffery & Co., of Kenosha, Wis., have issued a little booklet, giving a complete history of the New York-Pittsburg endurance run, and particularly the part played by the Rambler cars.

\*\*\*

The contest committee of the Automobile Club of America has announced March 15 and 16 as the dates for the second annual test of commercial motor vehicles. No route has been decided upon, but last year's course will probably be used again.

\*\*\*

The new building of the Haydon-Croninger Automobile Co., at 1337 Michigan boulevard, Chicago, is almost completed and will be ready for occupancy by the middle of the month. This company will handle the National electric and a new gasoline light car that is just coming on the market.

\*\*\*

The value of motor cycles exported from Great Britain during the year 1902 was \$761,166, while machines imported are valued at \$4,861,922. Of this amount over 80 per cent is credited to France. Parts were exported to the value of \$82,334, while the importation amounted to \$343,096.

\*\*\*

A vice president of the American Motor League calls attention to the maps published by the United States Geological Survey, which cover the more prominent portions of the United States and are sold at exceedingly low prices, running from 5 to 50 cents each. It is a great convenience to have an accurate map of one's locality, not only giving all the roads, but giving the contour of the ground, thus showing the grades of the hills. For touring purposes, at slight cost, one can secure accurate maps of the territory to be traversed, as well as the grades to be met, which adds much to the pleasure and profit derived from the

tour. Full information as to these maps with their prices can be secured free of charge by addressing "Director United States Geological Survey, Washington, D. C."

\*\*\*

The Automobile Club of Wilkesbarre, Pa., has elected the following officers for the ensuing year: President, Charles Bertels; vice president, C. L. Davis; secretary and treasurer, Laning Harvey.

\*\*\*

According to a gentleman who visited Thomas A. Edison at his factory recently, the famous inventor expressed the opinion that sooner or later automobiles would not have to be shod with expensive pneumatic tires, and that he had under consideration a rim of wood that would answer all purposes, the body of the car being swung on softer springs.

\*\*\*

At the recent congress of Belgian automobile clubs it was decided to urge the minister of finance to change the regulation concerning the numbering of cars and carrying of lamps, and make it compulsory for drivers of all motor vehicles, except motor bicycles, to pass an examination and to allow a speed of 10 to 12 miles an hour in cities and 25 miles in the country.

\*\*\*

The Automobile Club of Cologne, Germany, is receiving much congratulations for its success in making special arrangements with the governments of Belgium, France, Italy and Austria, which permit the members to cross the frontiers of these countries without having to pay duty or making deposit. The club holds itself responsible for any breach of its members.

\*\*\*

One of the events of the New York show week will be the second annual banquet of the Hyatt Roller Bearing Co. The dinner will be held in Breton Hall hotel, Broadway and Twenty-fifth street. Invitations have been issued to about two hundred of the firm's friends in the automobile trade. In order that the out of town guests may have little trouble in locating the place, arrangements have been made for electric cabs and busses of which a sufficient number will be on hand at the main entrance of the Garden to convey everyone. After the banquet, Colonel Albert A. Pope has consented to deliver an address. A vaudeville entertainment with the best talent will follow. The affair will be robbed as much as possible of all formality, the object that everyone present shall have as enjoyable an evening as possible.

\*\*\*

Great interest has been created among San Francisco, Cal., automobilists since the recent race meet there, and in consequence the Automobile Club of California at present has 200 members. Less than a month ago the membership did not exceed 125. At the last meeting of the board of governors the question of an automobile show was brought up and several of the members have taken the matter in hand, and it is probable that a show will be held in the spring. It is expected that many of the exhibitors at the eastern shows will arrange to go west after the exhibitions in the east have closed. E. P. Brinegar, president of the Pioneer Automobile Co., and Cuyler Lee, of the Western Automobile Co., are preparing to go east soon, and they will get the sentiment of the manufacturers regarding a show on the Pacific coast.

# AMERICAN MOTOR LEAGUE OFFICIAL BULLETIN

HAAC B. POTTER, Pres., Potter Bldg., New York  
CHAS. E. DURYEA, 1st Vice-Pres., Reading, Pa.  
W. GRANT MURRAY, 2d Vice-Pres., Adrian, Mich.

## — OFFICERS: —

S. W. MERRIFIELD, 3d Vice-Pres., 154 Nassau St., New York  
ROBERT L. STELLSON, Sec'y, 110 Nassau St., New York  
FREDERICK B. HILL, Treas., 11 Biolord St., Boston

## CHAIRMAN OF NATIONAL COMMITTEES:

LEGISLATION.....George R. Bidwell, New York, N. Y.  
ROAD IMPROVEMENT.....R. E. Olds, Lansing, Mich.  
LOCAL ORGANIZATION.....Charles F. Potter, Denver, Colo.  
TOURING.....W. H. Baker, Buffalo, N. Y.  
TECHNICS.....Charles E. Duryea, Reading, Pa.

MEMBERSHIP.....Frank A. Egan, New York, N. Y.  
SIGN BOARDS.....John B. Price, Hazleton, Pa.  
RACING.....A. G. Batchelder, New York, N. Y.  
PRESS.....Joseph Estocol, Philadelphia, Pa.  
HOTELS.....Francis N. Bain, Newburg, N. Y.

NATIONAL HEADQUARTERS, 150 NASSAU STREET, NEW YORK

## REDUCED FARES TO NEW YORK

have been granted by the railway passenger associations to Members of the American Motor League who will attend the national convention of the league at Madison Square Garden, January 15 to 25, 1904, week of the Automobile Show.

By this arrangement all members coming to the convention will be able to make the round trip at one and one-third the ordinary one-way fare.

This concession applies to all territory from Denver, Cheyenne, Pueblo and Trinidad eastward to the Atlantic, and covers all the states within the lines of the New England, Trunk line, South Eastern, Central, Western and South-western Passenger Associations.

## THE CONVENTION

has been specially called for the purpose of bringing together as many automobilists as possible and of engaging their attention and interest in the purposes and benefits of the American Motor League.

The first day of the meeting, January 19, will be a Good Roads Day, and speakers of national repute will address the league on that day.

On the following days papers and addresses on subjects of interest to all motor car users will be heard and steps taken to

## ORGANIZE STATE DIVISIONS

and select officers for such states as are substantially represented at the meeting.

A general invitation is extended to all automobilists who favor the purposes and work of the league to be present and take part in the proceedings.

Printed information concerning the matter of reduced railroad fares will be sent on receipt of postal card request.

No reduced rate will be given to any person not holding the proper certificate, and only members of the American Motor League will receive the benefit of this reduced rate.

All who are not members, but who wish to join the league and attend the Annual Convention at New York—Automobile Show week—should send name and address with one year's dues, \$2.00, and receive membership ticket. All such persons will be given the benefit of reduced railway fares under the arrangement above described. Address

AMERICAN MOTOR LEAGUE,  
150 Nassau Street, New York, N. Y.

### THE AMERICAN MOTOR LEAGUE

is an organization to promote the interests of all users of motor vehicles; to ascertain, protect and defend their rights; to oppose and prevent the enactment of unreasonable and oppressive laws; to encourage the use of motor vehicles by agitation and instruction; to provide its members with printed routes, maps and guide books by which touring may be facilitated and encouraged; to promote the work of improving the public roads and the erection of proper guide boards, and other signs necessary to guide and warn the users of motor vehicles; to select and appoint official hotels, repair shops and supply stations where its members may obtain reliable service at reasonable rates.

### WHO MAY BECOME A MEMBER

"Any man or woman, 18 years of age or over, of good moral character and respectable standing, friendly to the motor vehicle and its interests, shall be eligible to membership."

(Constitution, Article 2, Section 1.)

The League is extending its membership in all parts of the country. We invite all friends of the movement to join and aid in building up a powerful organization.

NO INITIATION FEE. ANNUAL DUES \$2 IN ADVANCE, OR \$3, INCLUDING 1 YEAR'S SUBSCRIPTION TO MOTOR AGE.

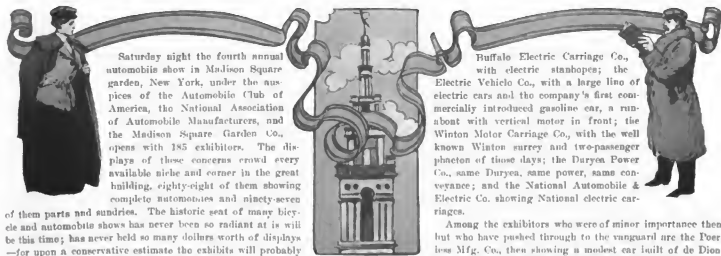
# MOTOR AGE

VOL. V. NO. 2.

JANUARY 14, 1904.

\$2.00 Per Year.

## MADISON SQUARE THE GAUGE OF PROGRESS



Saturday night the fourth annual automobile show in Madison Square garden, New York, under the auspices of the Automobile Club of America, the National Association of Automobile Manufacturers, and the Madison Square Garden Co., opens with 185 exhibitors. The displays of these concerns crowd every available niche and corner in the great building, eighty-eight of them showing complete automobiles and ninety-seven of them parts and sundries. The historic seat of many bicycle and automobile shows has never been so radiant as it will be this time; has never held so many dollars worth of displays—for upon a conservative estimate the exhibits will probably have a total value of over half a million dollars.

To one who has never visited an automobile show, this one in its splendor will present the picture of a miniature world's fair; to those who have visited all of the garden automobile shows, it will present a wonderful lesson of the industry's growth since November 3, 1900, when the first annual show was opened. At the show of 1904 the whole main floor, the tiers of boxes, the balconies, the restaurant, the basement and the arena platform are tightly packed with automobiles, automobile parts and appurtenances. There is no waste room; only sufficient aisle space to permit the moving about of persons who will daily visit the exhibition.

At that other show, 3 years ago, only the main floor and first balcony and part of the restaurant were used by exhibitors, the Automobile Club of America filling the main section of the restaurant with a loan exhibit. A track 20 feet wide encircled the main floor, occupying nearly one-half of the total available floor space of that section of the building. Yet it was an interesting show; not to be belittled or to be thought of without its effect upon the trade of today. Many of the strong firms of today's trade, occupying important positions in this year's show, were there in strength or infancy and many of the strong mechanical features which will be talked, talked, talked, to customers next week were there in some form or other.

That show inaugurated the commercial side of the automobile industry in America. The show of 1904 marks the progress of 3 years. It is interesting to roughly compare some of the exhibits which will be features at this show with those of that earlier one, and some of the names comprising the two respective lists of exhibitors.

Among the vehicle making concerns strong in the trade, such as it was at the time of the 1900 show, and who are prominent at this year's show, there are the Waltham Mfg. Co., then making a small gasoline Victoria and a piano box runabout; the Autocar Co., then making small two-cylinder cars similar in general principle to the Autocars of today; the Baker Motor Vehicle Co., showing runabouts; the Locomobile Co. of America, showing steam runabouts; the Woods Motor Vehicle Co., then, as now, making electrics of standard carriage design; the

Buffalo Electric Carriage Co., with electric stanbopes; the Electric Vehicle Co., with a large line of electric cars and the company's first commercially introduced gasoline car, a runabout with vertical motor in front; the Winton Motor Carriage Co., with the well known Winton surrey and two-passenger phaeton of those days; the Duryea Power Co., same Duryea, same power, same conveyance; and the National Automobile & Electric Co. showing National electric carriages.

Among the exhibitors who were of minor importance then, but who have pushed through to the vanguard are the Overhous Mfg. Co., then showing a modest car built of de Dion-Bouton parts; the Knox Automobile Co., then showing the little three-wheeler which was the predecessor of the big line of air-coolers shown this year.

Among the concerns which flourished to a greater or less extent then and whose sun has dropped toward or past the horizon since, are the American Bicycle Co., whose business is now owned by the Pope Mfg. Co.; the Riker Motor Vehicle Co., afterward absorbed by the Electric Vehicle Co.; Strong & Rogers, then building electric cars; the de Dion Bouton Motorette Co., then assembling de Dion-Bouton cars in America; the Canda Mfg. Co., then building gasoline quadricycles and other light vehicles; the Automobile Co. of America, famous as the builder of Gasmobiles; the Steam Vehicle Co. of America, which built the Reading steamer; the Trinity Cycle Mfg. Co., then the builder of the Steamobile; the Overman Automobile Co., making the Overman steam car; and the Mobile Co. of America.

The recollection of this show and of these names is sufficient to set one looking backward over the very fastest 3 years of American industry, and in a mood of wonderment when the cars of those days are compared mentally with the big limousines and racers and other marvels which this year crowd old Madison Square garden to its roof. The exhibition of 1904 is a great show of itself. It is a greater show in the light of American motor car history. Think what the exhibitors have done since the inception of automobile shows in Madison Square garden!

At the time of the opening of the show the whole trade is moving Manhattanward at a brisker gait than has previously characterized the annual pilgrimage. Nineteen hundred and four as an automobile season is opening. It is marked by many peculiar features of trading. The show is apt to develop a line of business and mechanical preferences that are important. Every one in the trade is awake to this. The show must of necessity outshine all past shows in commercial glory.

From every point of view the New York show of 1904 promises to be as record breaking as the American cars that directly after the exodus from Madison Square will engage in the Florida speed tournament.

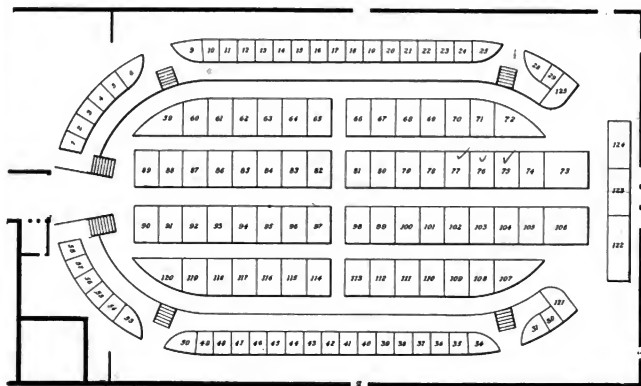


# EXHIBITORS AT THE NEW YORK SHOW

The initials in connection with space numbers refer to the sections of Madison Square Garden in which the exhibits are located, as follows: M. F.—main floor; A. P.—arena platform; B.—balcony; R.—restaurant; F. T. B.—first tier boxes; E. H.—exhibition hall; C. B.—central boxes; S. T. B.—second tier boxes; P. T.—first tier, Fourth avenue side. The exhibitors are:

Allers & Co., Harry.....	190, F. T.
American Ball-Bearing Co., The.....	149, B.
American Coll. Co.....	18, E. H.
American Motor Co.....	256, A. T.
Apperson Bros. Automobile Co.....	86 & 87, M. F.
Atwood Mfg. Co.....	181, B.
Autocar Co.....	64 & 65, M. F.
Automotor Co.....	9 & 10, A. P.
Auto. Import Co.....	11, E. H.
Auto. Supply Co.....	10, F. T.
Axtom Carburetor Co., The.....	190, P. T.
Bader Bros. Mfg. Co.....	162, B.
Baker Motor Vehicle Co., The.....	111, 112 & 113, M. F.
Baldwin Chain & Mfg. Co.....	168, B.
Berg Automobile Co.....	101 & 102, M. F.
Bills Co., E. W.....	21 & 22, E. H.
Birmingham Motor Co., The C. H.....	15, A. P.
Bixman Automobile Co., S. B.....	G. & H. in G.
Bowmer & Co., Inc., S. F.....	56, A. P.
Brennan Mfg. Co.....	3, E. H.
Briscoe Mfg. Co.....	150, B.
Brown Line Gear Co.....	168, B.
Buckmole Co.....	15, P. T.
Bufum Co., H. H.....	30, E. H.
Bufuto Electric Carriage Co.....	22 & 23, A. P.
Cadillac Automobile Co.....	122 and half of 123, M. F.
Central Automobile Co.....	O. & P. in R.
Centaur Vehicle Co.....	168, B.
Champion Mfg. Co.....	149, B.
Charley, C. L.....	D. in R.
Cole & Woop.....	142 & 143, B.
Columbia Lubricants Co.....	56, A. P.
Contingent Canoeing Co.....	120, P. T.
Columbus Motor Vehicle Co.....	27, E. H.
Cordwell Law, Mfg. Co., The.....	28, E. H.
Cortis & Co., William.....	186, B.
Covert Motor Vehicle Co.....	18, A. P.
Cramp & Son Ship & Engine Bldg. Co., Wm.....	188, B.
Crest Mfg. Co.....	48, 49 & 50, A. P.
Dayton Electrical Mfg. Co., The.....	135 & 136, P. T.
Dawson Machine Co., J. H.....	10, E. H.
Deane Brothers Co., The.....	145, B.
Desbross Motor Car Co.....	20 & 21, A. P.
Detroit Motor Works.....	183, B.
Diamond Rubber Co.....	57 & 58, A. P.
Dier Steam Engine Co.....	27 1/2, E. H.
Dietz, C. B., E.....	150, B.
Door Portable Electric Co., The.....	146, B.
Duerr Ward Co., The.....	33, E. H.
Duryea Power Co.....	Slide main stairway.
Eisenhuth Horseless Vehicle Co.....	17 & 18, E. H.
Electric Contract Co.....	141, P. T. B.
Electric Vehicle Co.....	82, 83, 84 & 85, M. F.
Elmore Mfg. Co.....	109 & 110, M. F.
English & Heric Co., The.....	29, A. P.
Fawkes Rubber Co.....	170, B.
Federal Mfg. Co.....	152, 153, 154 & 155, B.
F. I. A. T. Automobiles.....	4 & 5, E. H.
Firestone Tire & Rubber Co.....	30, A. P.
Fisk Motor Co.....	23, E. H.
Fischer Motor Vehicle Co.....	14, E. H.
Fisk Rubber Co.....	4 & 5, A. P.
Fischer, Alexander.....	16 & 17, A. P.
Franklin Mfg. Co., H. H.....	37, 38, 39 & 40, A. P.
Frederick Mfg. Co.....	12, E. H.
Funk, A. H.....	190, B.
Fury & Davis.....	157, B.
Graham Co., The.....	178, B.
Georges Richards-Branter.....	F in B.
G & J Tire Co.....	147, B.
Gleason-Peters Air Pump Co.....	3, A. P.
Grossman, Emil.....	128, P. T.
General Electric Co.....	177, B.
Gibbs Engineering & Mfg. Co.....	125, M. F.
Goodrich Co., Th. B. F.....	127, C. B.
Goodyear Tire & Rubber Co., The.....	54 & 55, A. P.
Harford Rubber Works Co., The.....	1 & 2, A. P.
Haynes-Apperson Co.....	88 & 89, M. F.
Hendons Mfg. Co.....	144, B.
Hers & Co.....	17, B.
Howard Automobile Co.....	14, E. H.
Hyatt Roller Bearing Co.....	126, C. B.
Imperial Wheel Co.....	156, B.
India Rubber Co.....	133, F. T. B.
International Auto. & Vehicle Tire Co.....	190, F. T.
Irwin Co., C. J.....	179, B.
Jeffery & Co., Thomas R.....	73 & 74, M. F.
Jones-Corbin Automobile Co.....	23, E. H.
Kirk Mfg. Co., The.....	70, M. F.
Knox Automobile Co.....	61, 62 & 63, M. F.

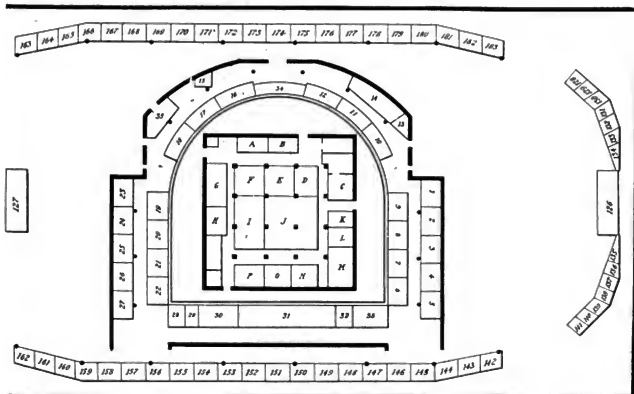
La Roche & Co., F. A.....	J in R.
Light Mfg. & Foundry Co., The.....	171, B.
Locomobile Co. of America, The.....	98, 99 & 100, M. F.
MacK Brothers Co., The.....	54 1/2, E. H.
Manhattan Lamp Works.....	132, F. T. B.
Marathon Motor Car Co.....	61, M. F.
Marcedo.....	D in R.
Midgley Mfg. Co., The.....	172, B.
Miller, Charles E.....	53, A. P.
Model Gas Engine Co.....	26, E. H.
Modern Mfg. Co.....	173, B.
Motor City Mfg. Co.....	162, B.
Morgan & Wright.....	157, B.
Mosier, Arthur R.....	187, B.
Consolidated Motor Co.....	A & B in R.
National Motor Vehicle Co.....	117 & 118, M. F.
National Carbon Co.....	130, F. T. B.
National Cement & Rubber Co.....	163, B.
Newbury & Dunham.....	13, E. H.
New Jersey Brake Co.....	190, F. T.
New York & New Jersey Lubricating Co.....	18, B.
Olds Motor Works.....	75, 76 & 77, M. F.
O. K. Machine Works.....	35, E. H.
Packard Motor Car Co.....	114, 115 & 116, B.
Parish & Leavitt.....	59 & 60, M. F.
Parish & Bingham.....	168, B.
17th Street Spark Coll. Co.....	134, F. T. B.
Peelless Motor Car Co., The.....	66, 67 & 68, M. F.
Phelps Motor Vehicle Co.....	9, E. H.
Pioneer Auto. & Campus Motor Co.....	184, E. H.
Pierce Co., The George N.....	59 & 60, M. F.
Pope Mfg. Co.....	173, B.
Pope Motor Car Co.....	94, 95, 96 & 97, M. F.
Pope-Robinson Co.....	93, M. F.
Post & Lester.....	163, 164 & 165, B.
Preston Automobile Mfg. Co.....	44 & 45, A. P.
Quincy Co., J. M.....	124, M. F.
Rainier Co., The.....	103, 104, 105 & 106, M. F.
Reid Mfg. Co., The.....	24, E. H.
Regan Automobile Co.....	19, A. P.
Richmond Mfg. Co.....	82, E. H.
Rochester Steam Motor Works.....	15, E. H.
Rodgers & Co.....	17, E. H.
Ross Mfg. Co.....	177, B.
Rotary Motor Vehicle Co.....	8, E. H.
Royal Equipment Co.....	190, F. T.
Royal Motor Car Co.....	11, 12, 13 & 14, A. P.
Rubay, Leon.....	131, F. T. B.
Sachs & Co., The.....	18, M. F.
Scott & Peck Co., The.....	184, B.
Societe Anonyme Des Anciens Etablissements.....	L & M in R.
Societe Franco-Americaine d'Automobiles.....	31, E. H.
Shelby Steel Tube Co.....	109, B.
Skinner, Kenneth A.....	N in R.
Smith, Elgie.....	8, M. F.
Smith & Mabey, Inc.....	E in F.
Six Rite Co., The.....	183, B.
Standard Automobile Co. of New York.....	C & K in R.
Standard Welding Co., The.....	148, B.
Stearns Co., The F. B.....	119 & 120, M. F.
Stevens Arms & Tool Co., J.....	84, 85 & 86, B.
Spilldorf, C. F.....	179, B.
Springer Motor Vehicle Co.....	North side of main stairway.
Springfield Automobile Co., The.....	7, E. H.
Stodder Tire Co., The.....	176, B.
Studebaker Bros. Mfg. Co.....	107 & 108, M. F.
Thomas Motor Co., E. R.....	half of 123 & 124, M. F.
Union Motor Carriage Co.....	190, B.
Twentieth Century Mfg. Co.....	174, B.
Trombley, W. Irving.....	34, E. H.
Universal Jack & Power Co.....	151, B.
Upton Machine Co.....	78, M. F.
U. S. Long Distance Automobile Co.....	24 & 25, A. P. and 124 1/2, M. F.
Valley Co., The.....	167, B.
Vernier Pupplet Magneto Co.....	166, B.
Veedor Mfg. Co.....	163, 164 & 165, B.
Vehicle Equipment Co., The.....	103, 104, 105 & 106, M. F.
Walter Car, The.....	31, A. P.
Walsham Mfg. Co.....	41, 42 & 43, A. P.
Warner Gear Co.....	167, B.
Weldon Mfg. Co.....	129, C. B.
Wetzel, T. J.....	167 & 168, B.
Whalebone Rubber Co.....	175, B.
White Sewing Machine Co.....	70, 80 & 81, M. F.
Whiteley Mfg. Co., The.....	137 & 138, F. T. B.
Willis Co., E. J.....	190, B.
Winston Motor Carriage Co.....	90, 91 & 92, M. F.
Woods Motor Vehicle Co.....	71 & 72, M. F.
Witte Watt Mfg. Co.....	8, S. T. B.
Martin F. L. C. Auto. Co.....	14, S. T. B.
Northern Mfg. Co.....	46 & 47, A. P.
Whitlock Coll. Pipe Co.....	139 & 140, F. T. B.
Wilson Motor Carriage Co.....	189, B.
Columbia Mfg. & Holt Co., Inc.....	29, E. H.
Sallsbury Wheel Mfg. Co.....	35, E. H.
Rehance Motor Cycle Co.....	35, E. H.
Livingston, D. M. Fine.....	22, S. T. B.



In the upper view spaces 1 to 58 are on the arena platform and spaces 59 to 125 on the main floor of the garden.

## SHOW SPACES AT MADISON SQUARE GARDEN

In outside lower view spaces 126-127 are central boxes; spaces 128 to 141, first tier boxes; and spaces 142 to 183 upper balcony spaces. The middle lower view is the exhibition hall or basement. The innermost lower view is the restaurant.



# MOTOR AGE

Published Every Thursday by  
THE TRADE PRESS CO.

1303 MICHIGAN AVENUE CHICAGO  
Telephone Calumet 7021

New York Office, 114 West 13th Street,  
London Office, American Publication Bu-  
reau, 13 Manor Park Rd., Harington, N. W.

AMERICAN  
PUBLICATION  
BUREAU  
LONDON  
13 MANOR PARK  
RD. HARINGTON  
N. W.

THE  
TRADE  
PRESS  
CO.  
CHICAGO  
1303 MICHIGAN  
AVENUE

Entered at the Chicago Post Office as Second  
Class Mail Matter

Subscription, Two Dollars per Year  
Foreign Subscription, Four Dollars

Any Newsdealer may obtain Motor Age through  
the Western News Co., Chicago, or any  
of its branches, on a returnable basis

## THE MAKERS WILL WORRY

The American automobile maker is threatened with a no inconsiderable amount of worry, and so far as the present may be concerned there seems to be no manner in which he may dodge it. The end of the two great exhibitions of motor vehicles, the middle of next month, will see him in a full siege of dilemma. Just he is in no different situation than have been hundreds of manufacturers and merchants in other lines during the past few years of unprecedented prosperity.

If, when the shows have come and gone, he has not been brought to a realization of the fact that he has practically a season's work on hand, either it will not be the fault of the buying public or present indications are doubtful.

No one reading the reports of the trade's conditions and prospects and analyzing the situation with care can doubt for a moment that the year 1904 will well repay most of those who have spent many years and vast fortunes in the field of automobile development, and that the others will have at least the consolation of a feeling of security in being on a sound footing.

If any maker finds that one of these blessings has not fallen to his lot, let him call it misfortune, but be honest and charge it to mismanagement. Barring unforeseen financial disaster—and the trade barometer is now exceedingly on the safe side—there should be no difficulty in selling every well-made, sensible, reliable and anti-freakish automobile manufactured in America this year, as well as many foreign cars to help make up the deficiency which appears to be in sight.

The worry will come with the desire and the endeavor to fulfill the pocketful of orders; when the pleading of agents is heard; when possibly the material man has slumped, or when a labor upheaval bores in sight.

Does anybody imagine that the manufacturer's life, notwithstanding his apparent prosperity, is one wholly of blissful joy, of ease, of comfort in mind?

## SHOULD TAKE NEW START

It is time that the racing board of the A. A. A. got down to business. Last spring the racing rules were re-written with a great flourish and a creditable job was done. Racing rules look well on paper. Since that time the

board has conducted a season of loose, almost unregulated, racing in all parts of the country.

The racing rules have not been enforced, entries have been carelessly handled; no particular attention has been paid to the eligibility of an entrant until after a protest—generally after the race; little or no attempt has seemingly been made to organize the racing upon a strong, unquestionable system.

The sport has through the season been clean and gentlemanly, because those who took part in it have been clean sportsmen. To them and to the local promoters and managers of the various race meetings belongs the credit of success. The racing board has had little to do with the success of the racing.

The Florida season is at hand and it is probable that several or all the world's records will be broken. America wants these records. She should have them if she gets them. It is not enough that they are recognized throughout the United States as world's records. They must be so recognized throughout the world. Loose methods of running record trials, honest as they may be, will not satisfy the European clubs, which are and always will be skeptical of American performances, just as in the early days of bicycle racing the European national clubs were prone to shrug the shoulder at the suggestion of world's records broken in the United States.

The A. A. A. to be an honor to the sport must place American record breaking upon a basis that will be unquestionable the world over. It has greater work than the taking of time in poorly classified events. World's records in classes which exist only in America are American records so far as the international advertising value of them is concerned. We must admit that straightaway racing originated in Europe and that Europe has been foremost in it, and that until such time as we can dominate in every way we must recognize kinds of world's records which are recognized on the other side of the Atlantic.

We have the cars and the drivers to break other records than those qualified with a lot of special conditions. We have the cars and the men to get the real thing. The A. A. A. has in the Florida contests a chance for a fresh start in the conducting of racing, and it should make the most of this chance to wipe out impressions that it has been a careless parent of the sport during the summer.

## CO-OPERATING WITH PAPERS

It may be taken as a fundamental truth that no manufacturer is averse to obtaining whatever advertising value there may be in the printed description of his articles of product; some manufacturers have a weakness, in fact, for just such incidental advertising, preferring it for the kind which is billed to them.

Occasionally a man comes along who does not hesitate to say that he does not need to advertise because he has sold all the goods he can make during the year, but that he would appreciate a description of those goods more than anything the trade paper can do for him. Any way one views the matter the conclusion is forthcoming that it is of mutual advantage to the paper and to the manufacturer that they co-operate in the preparation of descriptive matter for publication, that such matter may be a credit to the paper and to the manufacturer.

Some manufacturers do not give a rap whether the matter is of credit to the paper so long as it is of credit to them. They are shortsighted. Other manufacturers—and they

are not always inexperienced ones, either—imagine they know just what the paper wants to print always, forever and everlastingly. They are foolish.

Still others imagine they know better than does the trade paper what it should publish. They are still more foolish.

The trade paper generally establishes a policy of some kind and endeavors to stick to it; the trade paper knows what it wishes to publish and how to publish it.

It is of profit to the manufacturer to co-operate with the trade paper in the preparation of material on the lines worked out by the paper. The paper describes the manufacturer's automobile, says. It does not attempt to design or redesign it for him.

The manufacturer, on the other hand, often wishes to go further than furnishing the material for a description of his car by showing the paper a few fine points in the publishing business, learned presumably from issuing a catalogue now and then. This desire on the part of some manufacturers to furnish what they wish to furnish and not what the trade paper wishes furnished in the way of descriptive material is brought out every time a trade paper corresponds with the whole trade, asking from each individual of it some specific information to be used in descriptive matter covering the whole trade.

Experience in such deals has shown that exactly 50 per cent of the concerns addressed do not reply. Of the other 50 per cent, 25 per cent send something that was not requested or wanted and which is not in the least available for the purpose; 15 per cent make a large man's bluff at delivering the goods; 9 per cent co-operate in the real sense of the word and help the paper to produce an accurate and workmanlike description of the character outlined, while 3 or 4 weeks after the occasion of it all is over the other 1 per cent comes rushing to the front with special delivery letters and packages containing the "information requested in your recent favor."

Thus both the trade paper have to skirmish for the information it desires to present to the readers and which, incidentally, is of more than passing import to the manufacturers.

When an American automobile has captured the Gordon Bennett cup, and an American power boat has won the Harmsworth trophy, they may be put alongside the America's cup and allowed to gather dust.

Indications point to such an attendance at the two big automobile shows as to preclude the necessity of securing the presence of the president as an additional attraction, a la Paris.

If a few more of the old time cyclists fell into the automobile racing game it will not be long before somebody will want a 6-day race. Shades of Jack Prince and Senator Morgan!

If an out of town visitor to the New York show gets away without parting with initiation fees and dues in some automobile organization it will be because he arrived penniless.

If competition is the life of trade, how shameful it is that the west hasn't three or four automobile "controlling" organizations.

After you have solved the problem as to Ann's age, try to ascertain who actually made the first motor vehicle in America.

## FIRST UNDER 40 SECONDS

### Henry Ford on the Remodeled 999 Makes Officially Timed Mile in :39 2-5—Unofficial Mile in :36

Detroit, Mich., Jan. 12.—America is today the possessor of the mile straightaway record for automobiles. The long-talked-of, long-desired mark of 40 seconds has not only been met, but has been passed, and today the record stands at 39 2/5 seconds.

This time, which is officially sanctioned by the Automobile Club of America, was made by Henry Ford, with Tom Cooper's rejuvenated 999, the run being over a cinder path on the ice of Baltimore bay.

The former world's record was 46 seconds, made over a year ago by M. Angleres on the Dourdan course in France. Previous to the Angleres record, the fastest time had been made by Henri Fournier in America, so that the world's record returns to this country after an absence of over a year.

There were over a thousand people present to witness the attempt of Ford to lower the record. The splendid track conditions and known speed of the machine as evidenced by the unofficial mark made the day previous was a sufficient guarantee that the official record would be shattered.

The course laid out was 5 miles long on the ice of Baltimore bay, and this had been scraped and covered with cinders to prevent slipping as much as possible. The roadway is about 15 feet wide.

The start was made at the lower end of the course, and to the spectators and officials lined up along the measured mile, the machine and its riders was a mere speck in the distance. As the car flashed past the beginning of the mile two crouching figures were barely distinguishable and in an instant they were gone. Henry Ford was at the steering wheel, while E. G. Huff, his mechanic, hung to the side over the front axle, working by hand the lubricating oil pump.

The judges who took the time at the start drove hastily to the end of the mile and a comparison of watches showed that the time was 39 2/5 seconds, and that a new world's record had been established.

The car was shipped today to New York, where it will be on exhibition at the New York show, and after that will be taken to the Chicago show.

On Saturday Mr. Ford began his attack on the records and it will be remembered by those who saw it, for unless there was something radically wrong with four watches which timed him and which were within 1/2 of a second of each other, the machine did a mile in :36 flat. One watch is reported to have caught it at :35 1/2, one at :36 1/2, the others being on the even figure. Unfortunately, however, the record cannot stand, as it was not an official trial and not in the presence of the officials who had been appointed to officiate. They arrived 10 minutes later, but something went wrong and the trial was postponed for a few days.

The automobile men who were present and saw the trial—there were about a dozen automobile enthusiasts and several hundred ordinary spectators—all declare that Ford will do better than :36 when he tries again. They think the track is the fastest possible to build. Tom Cooper says it is a wonder.

The track is an unbroken stretch of ice 12

miles long. Hot cinders were first laid on the ice, which had been carefully swept. These melted into it and then froze. On these another layer of fine cinders was put and over this warm sand. Then the entire track was swept, brushing away everything that was loose. This track was five miles in length, a measured mile being laid off between the second and fourth miles, the first mile being to get up speed and the last to stop.

Ford ran several fast miles, all under :50, and finally made a preliminary trial. The timers stood at the far end of the stretch and took the time from the smoke of the pistol. It was easily seen that his previous performances were being discounted and the timers' watches stood as told above at the close. "He can do better than :36 sure," said Tom Cooper; and the crowd seemed to agree.

When the officials arrived Ford started out for his record. He got a splendid start but when the clutch was thrown in, the fly wheel loosened and Ford had a narrow escape from death. In an instant everything was tearing itself to pieces apparently. He put on the brakes and succeeded in stopping the machinery before any serious damage had been done. The machine was repaired in a short time but it was then too late to make the trial and this will be attempted in a few days.

The machine has been materially altered. The seat has been lowered and the driver's feet are now not more than 5 inches from the ground. The gear has been almost doubled, it now being four to five where before the engine made five turns to four of the wheel. It requires 450 turns of the engine to do a mile and on the block the motor made 1,500 revolutions a minute—which is about as fast as anything but a South American republic.

## BAY STATE ASSOCIATION

Boston, Jan. 11.—After numerous efforts the Massachusetts Automobile Association has been perfected and the A. A. A. is now satisfied that it will have good representation in this state. The local association was formed at a meeting of the representatives of the leading clubs in Massachusetts, at the Hotel Touraine last Saturday afternoon. Then Eliot C. Lee, president of the Massachusetts Automobile Club, was elected president. The other officers are: Vice-president, Franklin Weston, Berkshire Automobile Club; secretary, treasurer, L. H. Greenwood, Wachuset Automobile Club. None of the committees was appointed, it being considered best to postpone that work until the next meeting, which is to be held later in the month. The clubs having membership in the new association comprise the Massachusetts, Worcester, Springfield, Berkshire, Wachuset, Brockton, Marlboro, New Bedford and Lowell.

## BIG AMERICAN ROAD RACE

A road race promises to be one of the attractions offered to the automobilists of America if present plans of the American Automobile Association carry. W. K. Vanderbilt, Jr., has offered a cup for automobile competition, provided the A. C. A. finds a suitable course and will promote a race of from 200 to 300 miles.

The game of power boat racing is badly in bonds which may be expected to be an impairment of this company in building motor boat factor in that line of trade. The long ex-boat of all kinds is a matter of record.

## THE ENTRY LIST IS LARGE

### Races on the Ormond-Daytona Beach Will Have all the Prominent Drivers and Speed Cars

New York, Jan. 12.—America's greatest automobile operators are to meet in the races on the Ormond-Daytona beach, Florida, beginning January 23, and the results will settle the question as to the best man in America. Until the Packard car covered the mile in 46 1/2 seconds, W. K. Vanderbilt, Jr., had the honor of having driven the fastest mile of any man in America. To be sure, it was done on the other side, and the time was 48 seconds.

Mr. Vanderbilt entered for the Florida races some time ago, and at Cleveland Saturday Barney Oldfield declared he too hoped to take a try over the surf-rolled course and try his skill and nerve against that of the young American millionaire.

Mr. Oldfield will use the eight-cylinder Winton racer with which he has covered a track mile in 55 seconds, while the American sportsman will pin his faith to a 90-horsepower Mercedes, which arrived from Europe a couple of days ago, and which, after consideration, the importers' association decided to pass through the custom house without a protest.

Everything indicates a record breaking tournament at the Florida races for not alone is the entry list swelling with fast machines but motorists from all over the country are arranging to attend the affair. Instead of having the races start Wednesday, the first event will be Thursday, and the racing will continue Friday and Saturday, thus enabling exhibitors at the New York show to have an extra day in reaching the course.

Mr. Vanderbilt has entered for nine events, to which he is eligible, and the track champion is expected to do likewise. A match that should prove of interest was made last week. It will be between B. M. Shanley's 40-horsepower Decauville, and W. G. Brokaw's racing Renault.

The American Motor League has offered a special prize for a race between Florida owners of runabouts, and will also give second and third prize in the A. A. A. championships. They will be a free for all motor bicycle race the opening day, when the 15-mile event between Stanley and Brokaw will be held.

Although entries do not close until the end of the week, it is pretty well known that the following operators and machines will be in attendance at the big tournament:

W. K. Vanderbilt, Jr., 90-horsepower Mercedes; Harlan W. Whipple, 90-horsepower Whipple; H. S. Harkness, 90-horsepower Harkness; Barney Oldfield, 70-horsepower Winton; Joseph Tracy, 70-horsepower Peerless; O. W. Bright, 60-horsepower Mercedes; Dominick Lamberjack, 60-horsepower Clement; W. Gould Brokaw, 50-horsepower Renault; B. M. Shanley, Jr., 40-horsepower Decauville; F. A. Laloeche, 40-horsepower Durraque; William Wallace, 30-horsepower de Dietrich; Charles Schmidt, 25-horsepower Packard; F. B. Gallaher, 24-horsepower Georges-Richard; Otto Nestman, 14-horsepower Stevens-Duryen; W. C. Baker, Baker electric; George C. Cannon, Cannon stunner; J. J. Ryan, 60-horsepower Mercedes. Also a host of entries in the light classes is expected, both from eastern and southern amateur motorists.

## BANQUET SEASON OPENS AUSPICIOUSLY



EDITOR AGES

THE EASTERN NEWSPAPER PARTY'S ARRIVAL AT WINTON FACTORY

### SCRIBES ENTERTAINED

Once in a while men find in their business the material for much pleasant friendship. Many of the acquaintances formed primarily for the promulgation of commercial interests prove of much more lasting value. There is a certain satisfaction in feeling that one's business acquaintances are also friends.

The pleasantness of business friendship was well shown last Saturday when the Winton Motor Carriage Co. entertained thirty newspaper men at Cleveland. The company had invited members of the staffs of various automobile papers and the automobile writers of daily newspapers to visit the Winton factory. The eastern bunch was brought to Cleveland in a special Pullman car, with Percy Owen, manager of the New York Winton branch, as host en route. Charles H. Tucker, manager of the Chicago branch, served in the same capacity with regard to Chicago's two.

Early Saturday morning the whole crowd of newspaper men were met at the factory by the officers of the company and sent on a round of inspection of the big works, under the guidance of Sales Manager Charles B. Shanks, and his assistant in advertising, Charles W. Mears. The boys wound their way from room to room until the noon whistle stopped the wheels of industry on Berea road. Then in a dozen new canopy top Wintons they were whirled down to the center of Cleveland, where, at the Hollenden house, a complimentary luncheon of the variety that takes 2½ hours to eat and twice as many more to digest, was tendered them. At the head of the big square of tables Alexander Winton beamed in his characteristically modest way upon the fellows around him; next to him sat E. Schriver Reese, president of the Cleveland Automobile Club and toastmaster, while the third celebrity was Tom Johnson, mayor of Cleveland and automobilist at large. With other members of the Winton staff and newspaper men, the gathering numbered forty-four.

The speechmaking had none of the prosaic about it and was devoid of tiresome addresses—because it was all extemporaneous and spontaneous. Mayor Johnson was first introduced and he professed to be a record breaker, his motoring record existing in the fact that no-

body ever had more fun automobiling than did he. He eulogized automobiling in decided terms and declared that while he had in his life tried and abandoned all sorts of sport, automobiling he had tried and stuck unto. He prophesied the sure development of automobiling into every vocation.

The other speakers were W. R. Rose, of the Cleveland Plain Dealer; Barney Oldfield; Roy McArdle, of the New York World; Swinerton, of the New York Journal; Alfred Reeves, of the New York Mail and Express; E. E. Schwarzkopf, of Automobile Topics; A. H. Chadbourne, of Auto Life; A. G. Ratschelder, of Motor; H. M. Swetland, of the Automobile; R. G. Batts, of the Motor World; J. C. Kerrison, of the Boston Herald; W. L. Dudley, of the New York Times.

Thomas A. Henderson, vice-president of the Winton company, spoke with great feeling upon the early work of the company, the struggle it had undergone, and the measure of success attained. Percy Owen and Charles B. Shanks expressed the pleasure of the company in thus entertaining some of its cherished business friends, notable among which the newspaper men always had been; and Alexander Winton, in a few hospitable words, expressed eminent satisfaction in believing that all of the visitors had enjoyed the trip.

The others present were N. W. Beane, Boston Advertiser; B. F. Bower, Cleveland World; A. M. Benson, of Philadelphia; George Collier, of Cleveland; Gene Carr, New York Journal; H. P. Edwards, Cleveland Plain Dealer; J. H. Garris, New York Herald; Henry Hoy, Boston Herald; W. H. Harris, New York Tribune; John Hiseock, Philadelphia Record; Arthur N. Jervis, New York Sun; C. F. Marden, Boston Transcript; D. L. Reeves, Philadelphia Public Ledger; F. E. Spooner, New York, Commercial Advertiser; J. C. Wetmore, New York Mail and Express and Motor AGE; Alexander Schwalbach, Automobile Topics; Charles Lucas, Chicago Inter Ocean, and Louie E. Smith and E. R. Estep, Motor AGE. Other members of the Winton family were Secretary George H. Brown; Harry Fosdick, of Boston; Charles H. Tucker, of Chicago; A. E. Maltby, C. E. Fay, Clarence H. Brockway and Charles W. Mears.

### SYRACUSE MEN DINE

Syracuse, N. Y., Jan. 12—The second annual banquet of the Automobile Club of Syracuse at the Yates last Wednesday evening was a rousing success. When President Brown introduced C. Arthur Benjamin as toastmaster an astonishing thing occurred. The "honk! honk!" of a score of automobile horns greeted his name. The big dining room was prettily decorated with palms and automobile club colors. At the head table sat the officers of the club elected a few evenings ago: President, Willet L. Brown; first vice-president, Harlbut W. Smith; second vice-president, George S. Larrabee; secretary and treasurer, Frederick H. Elliott, and the guests of honor: Mayor Alan C. Forbes; Ralph S. Bowen, commissioner of public safety; Walter W. Magee, corporation counsel; Harlan W. Whipple, of the Automobile Club of America and president-elect of the American Automobile Association; Frank X. Wood, member of the assembly; Edward Schoenck, member of the assembly; Hendrick S. Holden, Justice Frederick W. Thomson, Robert E. Gilman, Willis C. Newell, Patrick J. Sweeney, Frederick B. Parker, good roads committee board of supervisors. Eighty enthusiastic automobilists and their friends made up the crowd.

Mr. Benjamin, after the oration from the horns had subsided, said: "The average person is not aware of the growth of the industry. Twelve thousand machines were made last year and sold for \$15,000,000. We expect in 1904 that 25,000 will be manufactured and 800 imported, the purchase price of all of which will be \$40,000,000. This will be 10,000 less than the demand. Seeing this, I advise all who intend to buy to get in their orders as soon as possible."

Mayor Forbes said: "I am a speedy bicycle rider and am interested in the sport. For this reason I am inclined to be liberal to automobilists. Harry Pierce took me to the golf club links one day last summer in 25 minutes. I thought that was about as fast as I would ever care to ride. I was mentioning the fact to John Wilkinson soon after and John said: 'You don't call that fast, do you?' He invited me to take a ride with him and I can assure you that my hair stood on end. It was just like drinking a bottle of champagne. It was splendid."

Robert C. Gilman, chairman of the good roads committee of the board of supervisors, told what was being done on the good roads question in Onondaga county. Corporation Counsel Magee said he was once on the old roving committee which drove over the roads of Onondaga county. He concluded by saying automobilists seemed to be afraid to give anybody a ride. He said several had promised to take him riding but had never shown up.

Charles H. Stillwell, who is at the head of the legal department of the H. H. Franklin Mfg. Co., said: "The lawyer looks at automobilism from the standpoint of how many suits he can get out of it. The sportsman asks how fast will it go? The manufacturer asks how much will it cost to make one and how many he can sell? The manufacturer has his troubles. The consumer complains and

takes his troubles to the dealer, and the dealer shifts them back to the manufacturer. The manufacturer is all the time studying to improve the machine. It will not be long before the majority of people who now use vehicles will own and operate automobiles, and good roads will follow and a recognition of the rights of automobilists."

Police Justice Frederick W. Thomson said he might apply for membership in an automobile club on the ground that when he was a candidate for mayor on the Democratic ticket last fall he was run over by the Republican machine. "There is no doubt," he added, "that the automobile has come to stay. It is not a fad and its influence will be beneficial to the nation in the matter of good roads. I should advise automobilists if they desire to get along to be careful to recognize the rights of other people. If thievery had not existed there would have been no laws against larceny."

Harlan W. Whipple told several pointed stories but said that he had been trying for a long time to drum it into the toastmaster's head that he was no speaker. He said he was glad to be present and predicted a rosy future for the Syracuse club.

Haribut W. Smith, the typewriter manufacturer, said the Syracuse club had become a power in automobiling and that to it belonged the honor of starting the New York State Automobile Association. He said an attempt was now being made to draft a bill which would be fair to all and to pass it at the present session of the legislature.

## NATIONAL HIGHWAY AID

### Bill Introduced in Congress Appropriating \$24,000,000 to Help Out State Road Work

Washington, D. C., Jan. 9.—The subject of good roads is receiving considerable attention in the national legislature at the present time. Closely following the introduction of Representative Brownlow's bill appropriating \$20,000,000 to improve the national highways is the introduction of a bill by Representative Latimer 'to establish in the department of agriculture a bureau to be known as the bureau of public highways, and to provide for national aid in the improvement of such highways.' The object and purpose of this bureau will be to co-operate with the various states in the improvement and construction of permanent public roads; to make investigations and experiments in regard to the best methods of road making and the best road-making materials, and also to co-operate with the various states in the construction of object lesson roads.

The bureau is to consist of three commissioners, two of whom are to be appointed by the president, while the third will be detailed from the engineer corps of the army. Six months from the time the proposed bureau is created any state may apply for aid in the improvement or construction of public roads within said state. One-half of the expense

of the improvement or construction of any public highway of any state that may receive the benefits of this act shall be paid by the treasurer of the United States and the other half by the state in which the highway is located. Certain provisions are made regarding the method of procuring the aid of the government.

The bill carries with it an appropriation of \$24,000,000 to be available at the rate of \$5,000,000 a year during the next 3 years. This bill differs in some respects from that of Representative Brownlow and in some quarters is regarded as a more desirable measure.

### MEET AT A. C. A. HOME

A special meeting of the New York State Automobile Association will be held at the club rooms of the Automobile Club of America, 753 Fifth avenue, New York, on January 21 and 22, commencing at 10:30 a. m. There will be a general discussion of the objects and work of the association and the ways and means by which they shall be carried out, particularly in the line of legislation and good roads. As this is the first meeting of the association it is expected that members of the clubs present in New York will attend the meeting as individual members of the association and participate in the discussions. As the meeting will take place during the automobile show at Madison Square garden, arrangements have been made by which any member of the association can secure a special round trip rate of a fare and one-third.



BANQUET OF THE SYRACUSE AUTOMOBILE CLUB



## EIGHT NATIONS ENTERED

### Gordon Bennett Race Assuming Proportions Greater Than Anticipated—European Plans

The entries for the trial races for the international cup event closed December 31 for all countries excepting Germany, where the closing of the list will take place February 1. Seven countries other than Germany, the holder of the trophy, will take part in the greatest of all automobile events—France, England, Italy, Austria, Switzerland, Belgium and the United States.

Ten French firms will take part in the trial events and some have already named the drivers of their cars—de Dietrich, who will have Jarrott, Gabriel and Rougier for drivers; Panhard-Levassor, with René de Knyff and Henry and Maurice Farman; Gardner-Serpellet, with Le Blon, Pelzer and Chanlaud; Hotchkiss, with Henry and Achille Fournier and W. K. Vanderbilt, Jr., according to Le Monde Sportif; Mors, with Jeandre, Salleron and Leger; Gobron-Brillie, with Rigolly and Durny as drivers for two of the three cars; Darracq, with Beconnais, Baras and Osmond; Bayard-Clement, with Henriot, de la Touloubre and Weigel; Richard-Brazier and Turcat-Mery. These last two firms have not yet decided who will drive their cars, and the Turcat-Mery firm has entered only two cars.

The British cars will be five Napiers, three of which will have S. F. Edge, M. Mayhew and J. Hargraves as drivers; three Wolsleys, three Huttons and three Darracqs.

Much surprise is manifested at the entry of the Darracq cars. The French firm decided at the last moment that it would build three cars at its British branch house, and, according to the rule, these cars must be made entirely out of English material. J. E. Hutton, who entered three cars of his name, is a newcomer for racing honors, and expects to exhibit one of the cup defenders at the Crystal Palace show.

The Nords concern intended for a while to build three cars in England, but later announced that it might not get them ready. Only one German representative will be selected in the trial races, inasmuch as the Daimler company will have two Mercedes cars in the race. Benz & Co., de Dietrich, Durrkopf, Neue Automobile Gesellschaft, Motorenfabrik, Protos and Jeannin & Co. are further German aspirants up to date. One of the Benz drivers will be Barberoux, who is considered in Germany the equal of Jenatton and Fournier. Jenatton and Baron de Caters will drive Mercedes cars. A number of other German manufacturers have expressed their intention of entering the contest.

Frederick Duffaux, the former bicycle champion of Switzerland, will be the representative of that country and drive an eight-cylinder 65-horsepower Duffaux car, now being made by Picard, Pietet & Co., of Geneva. It is also rumored that the Martini company has entered a car.

As Belgium, Italy and Austria will be represented, respectively by Pipe, F. L. A. T. and Mercedes cars, there will probably be no trial race, but the automobile clubs of these countries will likely give the cars a test either over a short distance or a hilly road. The Belgian drivers were selected by the Automobile Club of Belgium last week and will be

Baron Pierre de Crawhez; Lucien Hautvast, former bicycle champion, and M. de Gnders.

Among Paris sportsmen there is disappointment on account of the non-participation of the Renault firm. It was stated at the offices of the company that the reason for not taking part in the race was a desire of the family to honor Renault's memory. The Renault car has been one of the favorites for the coming event, the skill, cleverness and fearlessness of Louis Renault being taken into consideration in an even greater degree than the cars themselves. Another absentee which Parisians are commenting is that of the Charron, Girardot & Voigt. It is stated that this firm will not take part in any kind of racing events this year, being too crowded with orders.

## PLANS SOME BIG DOINGS

### The A. M. L. To Have Open House and an Interesting Program During Show Week

New York, Jan. 11.—The success of the American Motor League convention at Madison Square Garden seems to be assured. Monday next will be good roads day, when addresses are expected from Colonel A. A. Pope, Congressman George M. Pearce, of Maryland; Martin Dodge, director of the government road inquiry bureau; Commissioners McClintock, from Massachusetts; Macdonald, from Connecticut; and Budd, from New Jersey; State Engineer Hoad from New York and others. M. O. Eldridge, of the road inquiry bureau, will deliver an address, illustrated by stereopticon views of roads in different countries; Congressman Pearce will attend as the special representative of W. A. Brownlow, the author and sponsor of the Brownlow bill for governmental aid to the states in the construction of good roads.

On the second day there will be papers and addresses by Professor Carpenter, of Cornell University; Professor Hutton, of Columbia; E. W. Roberts, Angus Sinclair, Charles E. Duray, A. L. Riker, Henry Sonther and others. The further time of the convention will be given to subjects of general automobilizing interest and to the collection of data for the formation of state divisions and local organizations. A general invitation has been sent out to all automobilists to attend and take part in the proceedings.

It is suggested by the officers of the American Motor League that all persons who go to New York next week obtain from the railway ticket agent a certificate which will be supplied by the agent on request, to enable them to obtain return tickets at one-third the regular fare. If persons holding these certificates are not members of the A. M. L. they may qualify and obtain membership tickets at the convention.

## CLUB FOR BUYERS

An organization is being formed among the automobile operators of Chicago for the purpose of fixing a higher standard among drivers and maintaining uniform prices. The organization will be known as the Chicago Motor Club, and applicants for membership must pass a technical examination which shows them competent to successfully drive any American motor car. Those active in organizing the club are John Conroy, Arthur Sanderson, Richard Husk, William Foreman and Reuben De Launty. For a time the headquarters of the club will be at the office of the Cadillac Co. of Illinois, at 1312 Michigan avenue.

## IN THE HARTFORD TRADE

### Most of the Prominent Makers and Officials Will Visit the Gotham Show—Building Plans

Hartford, Conn., Jan. 11.—Manufacturers in Hartford are preparing for the New York show. The Electric Vehicle Co. is to have ten vehicles under cover and a flock of cars outside on the highway for demonstrating purposes. The Pope-Hartford car, made in the Columbia bicycle factory, will be a feature of the Pope display, and the company will have a number of cars on the street for purposes of demonstration. The display of this model will be in the same spaces with the other Pope exhibits of Toledo, Waverley and Hagerstown cars.

The Manhattan hotel will be the headquarters in New York of most of the Hartford men, while President Bndlog will put up at the Engineers' Club in New York, of which he is a member.

Harry Payne Whitney, who has several cars of foreign manufacture, and who has experimented some with American-built cars, has purchased a big Columbia with limousine body and in the trials which have been made of the car successful results have followed.

Thomas Sharpe, of East Hartford, formerly mate of L. D. Fisk's steam yacht Genevieve, is now mechanic for James B. Moore and is located with Mr. Moore at Daytona Beach, Fla.

Architect I. A. Allen, Jr., is preparing plans for a new automobile station and machine shop to be erected at once by Brown, Thomson & Co., the syndicate department store, on land in Temple street, east of the present property of the firm, and recently purchased from the DuMont estate. The building is to be of brick, two stories in height and will contain many thousand feet of floor space. The machine shop is to be equipped with all the latest machinery for working repairs on every type of vehicle, and the machinists' staff will be in charge of John Lights. W. L. Ledger will exercise personal direction of the department. Brown, Thomson & Co. will this year handle the Orient Truckboard, Cadillac, White steamer, Winton, Pierce Arrow and Stanhope, while the Franklin is a new car to be taken on.

So great is the demand upon the garage and repository of S. A. Miner that arrangements have been made for him to occupy the entire building, formerly occupied by St. Patrick's parochial school. The carriage repository formerly located in the building has removed and Mr. Miner now has all four floors.

It is now doubted if the Corbin car will be ready for this season's markets, and the reports that come from New Britain are not encouraging. Designer Jones has had so many and such good ideas for motor car construction that it has been impossible to choose from the wealth of ideas at hand. It now seems that the American Hardware Co. will be unable to meet the demand for this season. It has been practically settled that the car will be chain driven and have two cylinders.

W. F. Fuller, of Farmington avenue, is the first Hartford purchaser of a Pierce Arrow. The car was delivered to Mr. Fuller in Boston and he drove it to Hartford in all the snow and ice, and the severe cold.

Engineers Alden and Maxine, of the Electric Vehicle Co., took one of the big broughams, is the rough, from the company's factory during Sunday's storm and drove it for 20 miles

through snow drifts higher than the wheels. Drifts were mot where the roads had not been broken out, which had to be charged a half dozen times.

Work is now in progress on the addition to J. and F. W. Dart's Palace automobile station, and it is expected that the building will shortly be opened for the storage of vehicles. The addition will be 170 by 40 feet, while the main building is 130 by 40 feet and, like the main building, will be free of posts or other obstructions. The floor will be cement and the building of brick, with wood beams supporting the roof, which will be of tin. A modern sprinkler system will be installed throughout the main and new buildings, and the building will be protected by every device against fire loss. The new building will not only contain large spaces for the storage of vehicles, but quarters as well for a new automobile club, which is now being organized. The new club will have for its purpose the furthering of interests identified with automobile sport, the improvement of highways and the support of opposition sentiment to laws antagonistic to automobile interests. The club is to meet in the new station building, and meetings for purposes of organization are soon to be held. The Dart station will thus become the largest in Hartford, and one of the finest in the country. It has entrances from two principal thoroughfares, Trumbull and Church streets, and is adjacent to the railway station and the leading theaters and hotels. Many vehicles are now in the station in dead storage, and the proprietors have assurances of many boarders for the summer season. They will continue the agency for the Autocar, with which they were most successful last year, and the Northern runabout.

#### NEW YORK TRADE CLUB FORMED

New York, Jan. 11.—Over fifty members of the local trade met this afternoon at the Hotel Navarre, in the heart of the Thirty-eighth street retail district, and organized the New York Automobile Trade Club. The club will be carried out on a broad democratic plan, the idea being to establish headquarters where not only New York jobbers, dealers and craftsmen may meet, but visiting makers and tradesmen may gather with a chance of finding those with whom they may have business to transact. For the present, club rooms will be established in the Hotel Navarre. There will be a club dining room and cafe. A table d'hôte luncheon will be served daily at a moderate price, which is expected to attract a very general gathering of the trade at the noon hour.

It is expected that the club will promote valuable and pleasant fraternity in the trade. Already the applications for membership reach 160.

A board of directors was selected with power to elect officers and appoint all committees. The board consists of A. D. Proctor Smith, E. T. Birdsall, E. B. Gallagher, J. F. Plummer, Percy Owen, Colonel Pardee, E. T. Kimble, C. H. Tangeman and I. J. Woodward. These subsequently named A. D. Proctor Smith for president; E. T. Birdsall for vice president; E. B. Gallagher for secretary and J. F. Plummer for treasurer. Membership, house and by-laws committees are yet to be named.

Holland and Tangeman announce that the race between a F. I. A. T. automobile boat and a boat owned by Smith & Mahley would take place some time in May.

## COLISEUM IS NOT CLOSED

### Chicago Show Building Fought to Meet all Safety Requirements and Is Open As Usual

Chicago, Jan. 13.—The threatened closing of all or part of the Chicago Coliseum, as a result of the stringent action of the Chicago city council relative to public places, since the disastrous Iroquois theater fire, has come to a quiet end and the Coliseum is open without restriction and hence ready for the Chicago automobile show. This means that it has been found to be fireproof and safe.

When, after the fatality of two weeks ago, the city became awakened to the necessity of a more careful municipal supervision of places of public gathering than had existed, the mayor closed all theaters and many other buildings pending the revision of ordinances and the remodeling of buildings to conform to those ordinances. The building department to be on the safe side temporarily closed the Coliseum, pending a complete inspection of it. This action started the rumor afloat that there was a chance of difficulty being encountered in holding the show. It was only a few days, however, before the main building of the Coliseum was declared to be safe and was opened. The annex was opened a few days later. The only alteration that had to be made to bring about the latter opening was the cutting of an additional door in the south side of the annex. This work the owners of the building cheerfully and promptly undertook.

The final result is that the Coliseum is permanently and entirely opened and declared to comply with all of the existing regulations, there not only being exits of some kind upon three sides, but three large ones upon each side. During the show the management will not obscure these exits with decorations, and in the case of fire the building can be emptied in a few seconds without panic. Aside from churches, schools, etc., the Coliseum is today almost the only large building in Chicago which is open for the purpose of accommodating public gatherings.

#### SECOND TALK ON GASOLINE RIGS

Boston, Jan. 12.—The second lecture on gasoline vehicles at the automobile school occurred this evening, being delivered by a New York mechanic. In dealing with the particular requirements which a gasoline motor must possess to fit it for road locomotion, it was pointed out that it must be efficient, powerful for its weight, compact, and steady running, and a spring support must be provided for it. It must also be capable of running at widely varying speeds and automatic in all respects so far as possible. The advantages and disadvantages of high and low piston speeds were referred to and the questions of output and durability which they involve enumerated.

The advantages offered by the different types of multiple cylinder engine in respect to steady running and uniform power production were reviewed and the various forms which such an engine takes described and commented upon. The running gear which supports the engine must possess certain particular qualifications, such as flexibility, strength, good length between the axles and wheels, and tires of proper size. That the engine may be connected to its work by an application of almost any of the mechanical principles used for transmitting power was remarked upon, but it was pointed

out that it was necessary with the gasoline engine to interpose between it and its work a speed varying device, in other words a change speed gear, and the necessity for this was elucidated as well as the additional necessity of a clutch. Methods of engine control were explained and included mixture throttling, both manual and automatic, ignition timing, with its advantages and disadvantages, and the hit and miss system of governing.

Considerable time was also devoted to the consideration of the relative advantages and disadvantages of gasoline motive power as compared with steam and electric. Considerations of safety, readiness for service, convenience in driving, repairs, reliability, economy of operation, durability, water consumption, freedom from noise, odor and vibration, and hill climbing ability formed the basis of comparison.

The greater safety and readiness as well as the convenience in driving possessed by the gasoline machine was held to rather more than counterbalance the noise, odor and vibration of the gasoline car, while the superior efficiency of the gasoline engine over the steam engine was remarked upon. In point of reliability, durability, hill climbing power and ease of control, gasoline and steam power were shown to be nearly on a par. The field for employment of the electric motor being naturally restricted, the comparison dealt principally with steam and gasoline cars, while the electric motor was recognized as applicable to a particular class of service and not to universal employment as are the two other motive powers.

#### EXPECTS TO RESUME BUSINESS

Cleveland, Jan. 11.—The Cleveland Automobile & Supply Co., which creditors recently asked to have declared bankrupt, filed a schedule of its assets and liabilities in the United States court a few days ago. The schedule shows total liabilities of \$30,574.45, of which \$3,387.54 were secured claims and \$26,494.42 were unsecured claims. The total assets are \$34,690.89, including \$4,182 in automobiles and \$16,975 in open accounts. The last item would seem in a great measure to account for the failure. The receiver states that there is every prospect that the affairs will be settled up and that the business will be bought in and continued by some of the former stockholders of the company.

The name of H. J. Magoon, 572 Euclid avenue, was unintentionally omitted from the list of leading Cleveland automobile dealers whose interests were outlined in the review of the industry in Cleveland, published in the last issue of MOTOR AGE. Mr. Magoon took the agency for the Toledo car and opened his present establishment about August 1 of last year. Prior to that date he was with the Ohio Motor Car Co. Although starting late in the season, Mr. Magoon sold several Toledo cars and has already taken contracts for several 1904 cars for early spring delivery. He has worked up a large storage and repair business, with the result that his present quarters have proven too small.

#### R. E. OLDS RETIRES

Ransom E. Olds, who is known the world over as the inventor of the Olds motor and the Oldsmobile, has retired as general manager of the Olds Motor Works. Mr. Olds will retain a financial interest in the company. The general management will be in charge of Frederick L. Smith, of Detroit, Mich., the secretary and treasurer. Mr. Olds expects to spend the winter in California.



## IMPORTERS' FIGHT GROWS

### Open Rupture Threatened Between the A. L. A. M. and Those Who Handle Foreign Cars—M. Charley's Arrival Only Stirs Up the Trouble to Fever Heat—Sensations Promised

New York, Jan. 11—The importing pot is fairly boiling over with agitation. Events to trouble its recent placid surface have come thick and fast. With the arrival of M. Charley, the Mercedes man; the nearby coming of Lamberjack, of M. Clement's Franco-Americaine company; Henri Fournier, with his new Hotchkiss cars, and the threatened invasion of the show by a coterie of European jobbers and speculators, the war clouds of the conflict that have come and will come between the A. L. A. M. and its importers' branch, on the one hand, and the foreign disputants of the Selden patent on the other, grow darker.

Just how far the A. L. A. M. will go in preventing the unlicensed invaders from competing with our own licensed importers, has not been definitely announced by the powers that be. The eight regular members of the importers' branch are out for the scalps of their transatlantic assailants with big advertisements of warning of legal prosecution. There surely will be "something doing" during show week.

The first bubbling of the importing pot was domestic and local. It came with the announcement of the granting of Selden patent licenses to the F. A. La Roche Co. agent of the Darracq; and Hollander & Tangeman, representatives here of the F. I. A. T. Some of the members of the importers' branch complained that the branch should have been consulted as to the licensing of one of these concerns. There were threats of resignation, talks of dissolution of the branch and wild rumors of all sorts. There seemed to have been some misunderstanding as between the branch's advisory and executive capacity. The diplomacy of the leaders and maturer consideration finally prevailed, and in 24 hours the branch was again a happy family of the most approved "all for one, one for all" pattern.

The A. L. A. M. removed its attack on the Panhard & Levasor American branch by serving papers on Manager Massenet in a second suit based on the alleged infringement of another A. L. A. M. patent other than the Selden. Mr. Massenet said he had received instructions to place the matter in the hands of the firm's American attorney for investigation. He reported that the branch was established primarily to furnish parts and repairs for American owners of Panhards and that though machines could be ordered through the branch they would not be ready for immediate delivery.

The next sensation sprung was the announcement that an offer would be made to prevent the landing of W. K. Vanderbilt, Jr.'s 90-horsepower Mercedes, intended for the young millionaire's use in Florida races. There was a cry of protest from the purely sporting end of the game at this and the talk of such drastic action quieted down until to-day, when the announcement that the machine in question had been brought over by M. Charley and would be placed on view as a sample in the Mercedes stand at the show stirred up the talk again and proved an undeniably ag-

gravating thorn in the flesh of the licensed importers.

M. Charley got in on the Savoy and began forthwith yesterday to talk for publication. He vigorously pounded the tocsin and declared himself to be the exclusive agent for the Mercedes company for the United States, Canada, France and Belgium, and produced papers, which he claimed proved it. This was all very well, but when he metaphorically drew his sword and declared that he would prosecute legally all American importers or other bold persons who might dare to sell Mercedes machines in America, smiles and headscratching over how he was going to do all this followed. Smith & Mably and Alexander Fischer have been selling and will sell Mercedes, and so says the Auto Import Co., and the Societe Franco-Americaine d'Automobiles that they will also. From the tangle of facts and claims there would seem to be no exclusive Mercedes agency in this country, and M. Charley is very generally regarded as a mere "butter-in" for the show with trade as he was last year.

"I must say that I am pleased with the apparent popularity of the Mercedes automobile, but I must add with emphasis that I am the sole authorized agent for the Daimler Motoren Gesellschaft, of Cannstadt, Germany—the Mercedes company—for the United States, Canada, France and Belgium," said M. Charley. "I have made no arrangement with any one as yet in this country, but am in negotiations with several people."

"Regarding a French wholesale dealer who says he has bought some cars, the company will turn out 600 machines this year in the new factory and probably 850 next year. If

trice mentioned, but I am sole licensee of the American patent rights granted to me by the Daimler Mfg. Co., of Steinway, L. I., owners of the American Mercedes patents. Any machine that comes to America without the license plate and certificate will be the subject of prosecution by my attorneys."

"It would seem sufficient that I have had charge of the Mercedes exhibits and sales for three or four years in France and America, as is well known, but if it is necessary to take legal steps to establish my rights I shall not hesitate to do so."

"As to the Selden patent, and the claims of the holders of it that all automobiles must be licensed before they can come into this country, I am not prepared to discuss it as yet. I shall investigate the claims made and may have something interesting to say later."

"I am here now to attend an exhibit in the coming show and before returning to France, in February will go to St. Louis to see the space allotted by the German government to the Mercedes company. I shall have full charge of the exhibit at the exposition."

"It may be news to you to know that a well known yacht owner and automobile enthusiast of this city has ordered two 90-horsepower Mercedes marine motors to be delivered in April for a speed launch, the hull to be from 45 to 55 feet long and built here. The owner anticipates a boat that will be driven by twin screws at a speed of 40 miles an hour."

"At the show here I expect to see many of my old customers, for this is my annual visit. I will exhibit Mr. Vanderbilt's racer and Commodore Bourne's special brougham for the first few days, and then replace those with a 60-horsepower Mercedes with a phaeton tonneau body, with side entrances, capacity for five or six persons; an 18 to 22-horsepower motor, with tonneau body; also a 28-horsepower machine and a 60-horsepower marine motor."

"I am very sorry that I shall not be able to attend the races at Ormond. We will have several machines there of from 60 to 90-horsepower, and not only would I enjoy seeing their performance, but Florida, as well. I must return to France early in February, because I take part in the 100-mile launch race at Monaco, where I will enter a 90-horsepower boat, Mercedes 11. Then there are the preparations for the international car race in 1904 to be looked after."

"Perhaps it is needless for me to say that the market for first class automobiles never looked better than at the present time, and there are also many inquiries for launch motors. The speed launch will become, I believe, quite a fad, by reason of its useful nature to yacht owners and others."

"As to the type of cars, the partly closed top is rapidly superseding the unprotected body. We are now making a regular touring car with a longer frame, and also with side as well as front entrances."

New York, Jan. 12.—There are significant intimations that give reason to expect, late this afternoon or early tomorrow morning, news of an important matter in reference to the A. L. A. M. attitude toward the invading European jobbers in general and probably M. Charley, the Mercedes man, in particular.

The situation up to this morning seems to be about this: M. Charley is using as the



MOTOR AGE GARAGE OF INDIANA AUTOMOBILE CO., INDIANAPOLIS, IND.

any dealer in Paris or anywhere else comes to me with the money to pay for the goods, I will sell him whatever he wants.

"Not only am I sole agent for the coun-



THE IMMENSE STORE AND GARAGE OF THE PIONEER AUTOMOBILE CO., OF SAN FRANCISCO, CAL.

basis of his threats to prosecute others at tempting to sell Mercedes in this country, not only alleged patents covering features of Mercedes construction, but also some contract with the Daimler Co. of America, whose factory is at Steinway, L. I.

At A. L. A. M. headquarters it was admitted this morning that the Mercedes model was a confusing tangle. The situation as to the members of the importers' branch seems to be that the restriction of the members to handling certain makes does not apply so narrowly to the Mercedes, which is likely to be sold by two or three of the present licensed importers. M. Charley's citation of Mercedes patents in favor of his stand, in the fact of his failure to observe the American Selden patent, is regarded as weak. How large a share of the Mercedes output he actually controls cannot be determined until the final show down, for other jobbers and importers are claiming fully as large an allotment of the output as his.

It is denied at A. L. A. M. headquarters that Norris Mason has applied for a license and that official knowledge of Mr. Mason's share in the importing business does not go beyond his undisputed exclusive American agency for Michelin tires. The Clement agency seems to lie between the Sidney B. Bowman Automobile Co. and the Societe Franco-Americaine d'Automobiles. Mr. Clement is back of this company and as owner of the Clement company and a large stockholder in Panhard & Levassor, Renault Freres and other European concerns, is one of the most power-

ful and favored factors in the European selling trade.

Just what the A. L. A. M. and the importers' branch will do about the show invasion by Europeans will probably appear when the promised A. L. A. M. announcement is made today or tomorrow.

#### GUARANTEE LIKE INSURANCE

San Francisco, Cal., Jan. 5.—The Mobile Carriage Co., of this city, is adopting a policy which will be welcomed by purchasers. This company, which has the coast agencies for French cars and the Pierce Arrow, will guarantee purchasers that the repairs will not exceed an agreed sum per month, accidents excepted. Should the repairs be less than the guarantee, the owner gets the benefit. The Mobile company has opened a branch house at Los Angeles, and will have all of its line of cars represented there. The new warehouses and garage are at 333 South Main street. L. H. Johnson, one of the pioneer automobile men of Los Angeles, has been appointed manager of the branch house.

The San Francisco branch of the White Sewing Machine Co. has been notified that there will be no advance in the price of the White touring car. Previous instructions were that the price would be advanced \$500 on January 1, but the company will continue the 1903 price.

A new automobile that will cause considerable curiosity is now being constructed by G. J. Parker, an engineer in the southern part of the state. Parker is the youngest full-fledged engineer in the state, being only 21 years of

age. He has undertaken to turn out a 1,000-pound steam automobile which he promises will be something entirely new in that line. The body of the car is 9 feet long and is made of spruce. The width of the car will be about 4 feet. The seats will be arranged in separate compartments. The car when finished will stand 5 feet high, measuring from the top of the seat back. The boiler will be placed lengthwise with the machine and under the body. By so placing the boiler the strain from the chain will be lessened considerably and will not have a tendency to wrench the boiler out of position. The engine will be of 6 horsepower.

#### FRENCH CLASSIFICATION ADOPTED

New York, Jan. 12.—At the call of Chairman Parlington, a conference of a number of the leading lights of the racing world was held last week to discuss a number of important matters, chief of which was that of weight classification. A number of amendments, which were suggested in reply to the circular sent out by the racing board in a circular letter, were discussed at length. The most radical suggestion offered was the acceptance of the French weight classification, as follows:

First class	.....	650 to 1,000 kilos
Second class	.....	400 to 650 kilos
Third class	.....	250 to 400 kilos
Fourth class	.....	50 to 250 kilos
Fifth class	.....	50 kilos and under

The French rules require two passengers of not less than 60 kilos each to be carried by vehicles of the first and second classes.

## COST OF FRENCH CARS

### The Prices Placed on European Cars Are Higher Than Those of Corresponding American Cars

To those who marvel at the prices of foreign cars in America, after the duty and importing costs and profit have been added, the list selling prices of the principal cars displayed at the Paris show may be of interest.

The prices, reduced to dollars, of classes without bodies are as follows:

ADER—9-horsepower, \$1,300; 12-horsepower, \$1,600; 15-horsepower, \$2,200; 18-horsepower, \$2,200; 24-horsepower, \$3,600; 30-horsepower, \$5,000; 40-horsepower, \$10,000.

AMER—12-horsepower, \$1,500; 16-horsepower, \$1,900; 20-horsepower, \$2,500; 30-horsepower, \$3,200.

AUTOMOTICA—12-horsepower, \$2,400; 20-horsepower, \$3,600.

BABEY—6-horsepower, \$680; 9-horsepower, \$680; 12-horsepower, \$680; 14-horsepower, \$1,100; 20-horsepower, \$2,000; 24-horsepower, \$2,300.

BENZ—8-horsepower, \$1,300; 12-horsepower, \$1,875; 24-horsepower, \$3,750; 35-horsepower, \$5,500.

BENTLEY—12-horsepower, \$2,100; 20-horsepower, \$3,200; 40-horsepower, \$5,000.

HELICA—12-horsepower, \$2,200; 16-horsepower, \$2,800.

HOLINE—6-horsepower, \$550; 9-horsepower, \$700; 10-horsepower, \$740; 12-horsepower, \$1,200; 16-horsepower, \$1,400; 24-horsepower, \$1,980; 30-horsepower, \$2,180.

BOLLE LION—20-horsepower, \$4,000; 30-horsepower, \$6,000.

BIOTROT—10-horsepower, \$1,480; 12-horsepower, \$1,800; 15-horsepower, \$2,000; 20-horsepower, \$2,600; 40-horsepower, \$4,600.

BRAP—6-horsepower, \$560; 8-horsepower, \$920; 10-horsepower, \$1,520; 12-horsepower, \$1,500; 14-horsepower, \$1,440; 16-horsepower, \$1,740; 24-horsepower, \$2,140; 30-horsepower, \$2,540.

CHENARD ET WALCKER—12-horsepower, \$1,600; 18-horsepower, \$3,200.

CHARRON, GLENDON, VOIGT—15-horsepower, \$3,000; 25-horsepower, \$4,400; 40-horsepower, \$6,000.

CHENX—10-horsepower, \$1,500; 12-horsepower, \$1,600; 16-horsepower, \$1,900; 20-horsepower, \$2,000; 30-horsepower, \$2,800; 40-horsepower, \$3,200.

COUTERRA—7-horsepower, \$750; 10-horsepower, \$1,000; 12-horsepower, \$1,900; 16-horsepower, \$2,600.

DARRACQ—8-horsepower, \$810; 9-horsepower, \$1,080; 12-horsepower, \$1,400; 15-horsepower, \$2,040; 24-horsepower, \$2,600; 28-horsepower, \$3,400.

DECAVILLE—14-horsepower, \$2,260; 16-horsepower, \$2,500.

DELATHE—8-horsepower, \$1,080; 12-horsepower, \$1,700; 16-horsepower, \$2,600; 24-horsepower, \$3,000.

DE DIETRICH—12-horsepower, \$2,400; 16-horsepower, \$3,000; 24-horsepower, \$3,900; 35-horsepower, \$5,600.

DE DIOT-BOTTON—8-horsepower, \$970; 10-horsepower, \$1,410; 12-horsepower, \$1,680.

F. A. T.—10-horsepower, \$2,800; 24-horsepower, \$3,600; 60-horsepower, \$8,000.

LA FRANCAISE—10-horsepower, \$1,130; 14-horsepower, \$1,450; 16-horsepower, \$1,750.

GERMAIN—7-horsepower, \$1,130; 12-horsepower, \$1,560; 15-horsepower, \$2,400; 20-horsepower, \$2,920.

GILLET-FUREST—6-horsepower, \$1,260; 9-horsepower, \$1,520; 12-horsepower, \$1,720.

GLADIATOR—8-horsepower, \$1,300; 12-horsepower, \$2,000; 16-horsepower, \$2,600.

GORDON-BRILLIE—12-horsepower, \$1,700; 18-horsepower, \$2,760; 20-horsepower, \$3,000; 25-horsepower, \$4,400; 28-horsepower, \$5,600.

GUTHRIE—8-horsepower, \$1,000; 12-horsepower, \$1,200; 20-horsepower, \$2,800.

HATCHEL—9-horsepower, \$840; 12-horsepower, \$1,580; 24-horsepower, \$2,520.

HERALD—10-horsepower, \$1,600; 18-horsepower, \$2,700; 24-horsepower, \$3,800.

HOTCHKISS—20-horsepower, \$5,000; 35-horsepower, \$7,000.

HENRIOT—6-horsepower, \$620; 8-horsepower, \$680; 10-horsepower, \$1,200; 16-horsepower, \$1,280; 18-horsepower, \$1,960; 30-horsepower, \$2,400. HICUTY—12-horsepower, \$1,450; 16-horsepower, \$2,400.

P. LAMBERT—9-horsepower, \$780; 12-horsepower, \$1,100; 25-horsepower, \$3,000.

MENCIERE—18-horsepower, \$6,000; 28-horsepower, \$7,000; 40-horsepower, \$9,000; 60-horsepower, \$11,000.

MIXERIE—10-horsepower, \$920; 12-horsepower, \$1,300; 16-horsepower, \$1,540; 24-horsepower, \$1,900.

MOUS—8-horsepower, \$1,700; 12-horsepower, \$2,300; 14-horsepower, \$2,800; 15-horsepower, \$2,800; 16-horsepower, \$3,700; 24-horsepower, \$4,200; 30-horsepower, \$5,200; 40-horsepower, \$10,000.

NAPIER—15-horsepower, \$4,000; 24-horsepower, \$5,200; 45-horsepower, \$6,500; 60-horsepower, \$9,000.

FAVARD-LEVASSOR—7-horsepower, \$1,360; 8-horsepower, \$1,800; 10-horsepower, \$2,300; 15-horsepower, \$3,000; 18-horsepower, \$3,600; 24-horsepower, \$4,600; 35-horsepower, \$6,000; 45-horsepower, \$9,000.

PARRY-THIELLES—9-horsepower, \$1,000; 16-horsepower, \$1,540; 12-horsepower, \$1,700; 14-horsepower, \$1,900; 16-horsepower, \$2,500; 24-horsepower, \$3,000; 30-horsepower, \$3,200.

PEYROT—6-horsepower, \$920; 7-horsepower, \$1,260; 10-horsepower, \$1,400; 12-horsepower, \$2,560; 18-horsepower, \$3,160; 25-horsepower, \$4,460; 40-horsepower, \$6,000.

PIRE—15-horsepower, \$2,700; 20-horsepower, \$3,300; 30-horsepower, \$4,600.

RENAULT—7-horsepower, \$1,100; 10-horsepower, \$1,500; 14-horsepower, \$2,000.

GEORGES RICHARD-HEASLER—8-horsepower, \$1,200; 12-horsepower, \$1,600; 16-horsepower, \$2,200; 24-horsepower, \$3,000.

ROCHET-SCHNEIDER—16-horsepower, \$3,000; 24-horsepower, \$4,000.

RADE—10-horsepower, \$1,300; 14-horsepower, \$1,900; 16-horsepower, \$2,400; 20-horsepower, \$2,600; 30-horsepower, \$3,000; 45-horsepower, \$4,400.

REPOLLET—9-horsepower, \$1,400; 15-horsepower, \$2,300; 40-horsepower, \$6,000.

TONT-HECKE—9-horsepower, \$1,190; 16-horsepower, \$2,300; 25-horsepower, \$3,900.

VINOT-INDOING—16-horsepower, \$1,580; 14-horsepower, \$2,200; 20-horsepower, \$2,600.

The prices of some of the complete cars are as follows:

AGYLE—10-horsepower, \$1,740; 12-horsepower, \$2,120; 16-horsepower, \$2,750.

CLEMENT-HAYARD—6-horsepower, \$1,000; 7-horsepower, \$1,100; 10-horsepower, \$1,500; 12-horsepower, \$2,200; 16-horsepower, \$2,800; 24-horsepower, \$4,000.

DECAVILLE—12-horsepower, \$1,980.

GERMAIN—30-horsepower, \$5,000.

FOUILLARD—6-horsepower, \$1,100; 8-horsepower, \$1,190; 10-horsepower, \$1,700; 12-horsepower, \$1,800; 16-horsepower, \$2,500.

A. LAMBERT—6-horsepower, \$620; 9-horsepower, \$1,100; 12-horsepower, \$1,400; 16-horsepower, \$1,800; 24-horsepower, \$2,400.

MIXERIE—7-horsepower, \$600.

PIRE—12-horsepower, \$1,000.

WOLSKLEY—6-horsepower, \$1,000; 12-horsepower, \$2,340; 24-horsepower, \$3,500.

The average prices of all the classes above listed is, for the 6-horsepower models, \$798.50;

7-horsepower, \$1,114; 8-horsepower, \$1,165.50;

9-horsepower, \$1,092; 10-horsepower, \$1,381;

12-horsepower, \$1,713.75; 14-horsepower, \$1,961;

15-horsepower, \$2,724; 16-horsepower, \$2,274;

18-horsepower, \$3,330; 20-horsepower, \$2,289;

24-horsepower, \$3,282.75; 25-horsepower, \$3,960;

28-horsepower, \$5,333; 30-horsepower, \$4,312;

35-horsepower, \$6,025; 40-horsepower, \$6,206;

45-horsepower, \$6,706; 60-horsepower, \$9,333.

The average prices of the complete cars is, for 6-horsepower models, \$930; 7-horsepower, \$880;

10-horsepower, \$1,646.50; 12-horsepower, \$1,957;

16-horsepower, \$2,527; 24-horsepower, \$3,300.

Dry batteries, together with magnets, are rapidly replacing the cumbersome and sloppy wet cells for boat use.

## MAKERS FEAR BELGIANS

### Country Overcrowded With Factories and Surplus Goes Abroad—France Affected

The rapid increase of the automobile trade in Belgium, and especially in exports, has again become one of the principal topics of conversation among dealers and manufacturers in France, while the trade papers of that country also give signs of uneasiness at the steady onward figures given out by the government officials each month. It is no secret that the majority of French dealers and makers have more fear of Belgian invasion than of German, English or American competition. These three countries can hardly produce sufficient motor cars for their home consumption, and really need not look to export trade as a necessity.

In Belgium conditions are different. There are too many automobile and motor cycle factories in proportion to the population, which is about 7,000,000, and were it not for the increasing foreign trade of the country, a number of automobile manufacturers would have had to close their plants.

Figures given out by the Belgian government in December show that during the 11 months, including November, 1903, the exportation of completed cars amounted to \$1,043,005, against \$828,221 for the corresponding period in 1902 and \$140,803 in 1901. The export of motor cycles during the same time amounted to \$268,706 in 1903; \$85,877 in 1902 and \$18,677 in 1901. Parts were exported to the value of \$474,952 during the same period last year. In 1902 the total value for 11 months was \$219,409 and in 1901 only \$54,363.

The importation of automobiles during the corresponding time amounted to \$86,851 in 1903; \$87,837 in 1902, and \$67,600 in 1901. The importation of motor cycles increased and reached \$5,426 during the 11 months last season, as against \$3,822 in 1902. There was also an increase in the importation of parts, which shows \$5,976 for last year and \$4,870 for 1902.

England is Belgium's best customer for automobiles, having purchased motor cars to the value of \$117,850 during 11 months. France was next, with \$55,304.

The most surprising increase is in the export of motor cycles. During the month of November, 1903, seventy-seven of these machines of a total value of \$5,251 were sent to foreign lands, while during the corresponding month in 1902 only thirty-two motor bicycles, valued at \$3,446, were exported.

### BUFFALO DEALERS ARE STRONG

Buffalo, N. Y., Jan. 11.—The board of governors of the Buffalo Automobile Club held an important meeting last Thursday afternoon. It is the intention of the club to see that the speed ordinance is complied with by its members and flagrant violation will be considered ample grounds for dismissal from membership.

The executive committee of the Buffalo Automobile Trade Association held its first meeting at the Iroquois, Saturday. The principal business transacted was the election of the following members: Gus G. Buse, Ripper Motor Carriage Co., Roe Automobile Co., Hayes Automobile Co., Meadows & Hafer, W. J. Willoughby, W. C. Hayes Automobile Co., Queen City Automobile Exchange Co., J. A. Worthington, G. H. Poppenberg, Alexander

Weller Co., Hartford Rubber Works Co., Fred Honninger. The charter members of the organization are: George N. Pierce Co., E. R. Thomas Motor Co., Centaur Motor Vehicle Co., J. A. Cramer, Buffalo Automobile Exchange, P. W. Eigner, Duquesne Motor Car Co., O. K. Machine Works, B. F. Goodrich Rubber Co., Fisk Rubber Co., Globe Cycle Co. The association is particularly strong, having among its active members every automobile manufacturer and dealer in Buffalo, while in the associate membership list is found three of the four tire manufacturers with branch stores here and the Diamond Rubber Co.'s application will be acted upon at the next meeting.

There seems to be no limit to the new garages and dealers. Last week the Buffalo Garage Co., 414 W. Ferry street, was incorporated with a capital of \$20,000. The officers are: B. F. Milson, president; Byron B. Shultz, vice president, and George H. Smith, secretary-treasurer. The agency for the Thomas has been secured for Buffalo and Erie and Niagara counties. This concern claims it will have a thoroughly equipped and modern garage.

Gus G. Buse, who some time previous took on the White agency, has also closed for the Northern line of cars. He has made the Queen City Automobile Exchange Co. one of his selling agencies. The latter company has also secured the agency for the Orient buckboard.

#### CHANGES IN THE NEW YORK LAW

New York, Jan. 12.—Senator Bailey at Albany, in accordance with a request made by automobilists, has offered an amendment to the state automobile bill, of which he was the father. The present law provides that in portions of cities not closely built up, a speed of 15 miles an hour may be maintained. The amendment authorizes the local authorities to designate what portion of a city shall be regarded as not closely built up. This change was desired especially by Buffalo.

It is required by the present law that automobiles shall not exceed 8 miles an hour when passing foot passengers or persons driving horses or other domestic animals on a public highway. An amendment makes this provision apply only when automobiles are coming from the opposite direction. This will permit them to pass at any rate of speed from the rear.

A third amendment provides that when a chauffeur violates a law he shall be punished by the suspension of his certificate instead of his right to drive an automobile, as the present law provides.

#### FACTORY WANTED

Muskegon, Mich., wants an automobile factory. Its desire is so strong that it feels willing to risk considerable of its worldly treasure in the venture. It asks only that it be convinced that the company that considers moving to Muskegon be a legitimate, proven concern. Those desiring to communicate with the Muskegon parties interested in the project may do so by addressing Dr. C. J. Dove, 30 Western avenue, Muskegon.

#### SANTOS-DUMONT ARRIVES

New York, Jan. 11.—On the Savoy, which arrived Sunday, was Santos Dumont, who is here to attend the automobile show at Madison Square garden. He is particularly interested in gasoline motors, as it is by their aid that he has been able to travel through the air.

## SOUTH NOW WAKING UP

### Nashville the Automobile Center of Tennessee—Increase in Orders in 1903, 600 Per Cent

Nashville, Tenn., Jan. 7.—A year ago there were six automobiles in this city, today there are forty-four owners, making an increase of over 600 per cent in the year. The dealers are expecting a big business the coming year and it is estimated that 200 machines will be sold. At the beginning of last year there was only one dealer, now there are four. The John W. Chester Co. was the first in the field, and Mr. Chester was also the first man in the city to own an automobile. The company sold three carloads of machines last year. It now handles the Olds, Packard and Peerless.

The buying season opens about the first of March, but some sales will be made before that time. In speaking of the prospects for the coming season Mr. Chester said: "There are better prospects now than ever before. In fact, the first of last year there were no prospects at all. I took a chance and bought one car load and sold three carloads. This year we expect to sell ten carloads."

The Auto Co. was the second to go into the business. It was started in July under the management of W. F. Anderson, and in November was incorporated with a capital stock of \$25,000. This company has bought the American Machine Co., and with the extensive amount of machinery it now owns, any part of a machine can be made and repair work will be done promptly. The company is agent for the Cadillac, Queen, Autocar and Winton, and the agencies for other cars will be secured at the New York show. Mr. Anderson said: "Between July and November of last year we sold thirteen machines. This year we expect to sell fifty at the very least. We have the agency for middle Tennessee with all our machines, and we expect that next season will be the banner year in the history of the automobile business of the south. We will place agencies in all the larger towns in the vicinity and expect to sell many cars outside the city."

The last company to enter the automobile business was the Southern Electric Co., which has a building 70 by 90 feet, which will be used for display, storage and repair purposes. This company has the agencies for the Rambler, St. Louis and the White.

Duncan R. Dorris took the agency for the Orient Buckboard last summer, but did not do much with it until November, when he fitted up a garage on Spruce street. Mr. Dorris has an arrangement with the Southern Electric Co. by which they both handle the Rambler and St. Louis machines. He is a brother to G. Preston Dorris, vice-president and superintendent of the St. Louis Motor Carriage Co., and the first model of the St. Louis car was made in Duncan Dorris's bicycle shop several years ago. Mr. Dorris will also handle the Rambler, Crescent and Indian motor cycles. At the present time there are only a few motor cycles in Nashville.

#### ONE FOR EACH CAR

Boston, Jan. 11.—W. E. Eldridge has made several radical changes in the local business affairs of his company during the past week, and has prepared for an active season of work by securing the services of several well known automobilists. The Pope Mfg. Co., of whose

local branch Mr. Eldridge is manager, handles several lines of automobiles and this year Mr. Eldridge is to try a new plan. He believes that by giving each particular line of cars to the charge of one man he should be able to do as much business on each car as if he had but that one agency. With that idea in view he has reorganized his establishment. The new attaches are H. E. Marvel, formerly with the Electric Vehicle Co., who will have entire charge of the Waverly electric; F. G. Plummer, formerly with the Park Square Automobile Station, who will sell the Cadillac; and H. H. Johnson, formerly with the Crestmobile company, who will handle the Pope-Tribune and the Pope-Hartford. Mr. Adams will remain in charge of the department given over to the Pope-Toledo, while Mr. Peck will have charge of the bicycle department. The building is to be remodelled, and made into a first class garage. It is situated on Stanhope street, in the heart of the automobile district and when complete will be one of the best of its kind in this city.

Cleveland was visited during the past week by three of Boston's leading agents. Harry Fosdick piloted a party of newspaper men to the Winton festivities, George H. Lowe went there to talk over the interests of the White steamer, and Mr. Morrison went to confer with the Peerless people regarding the garage to be constructed by them in this city.

#### QUIET REIGNS IN WASHINGTON

Washington, D. C., Jan. 9.—The first week of the new year has been rather a tame one in local automobile circles, due chiefly to the weather. Several dealers will attend the New York show for the purpose of securing agencies.

In the reorganization of the Edison Automobile Co. into the District of Columbia Automobile Co., which took place last week, W. Leslie Edison becomes general manager. The garage at 1026-28 Connecticut avenue will be continued.

It is understood that one of the largest automobile companies in this city has secured an option on a large block of ground in the northwest section of the city and will begin at once the erection of a garage of the most approved type.

#### MOTOR CAR EXPORTS

The latest compilations of the treasury department show that the exports of automobiles and parts thereof increased from \$55,473 during November, 1902, to \$107,521 during the same month of 1903. The total exports for the 11 months ending November, 1903, were valued at \$1,419,481, as against \$1,026,083 during the same period of 1902 and \$801,920 during the 11 months of 1901. These figures make it plain that American automobiles are finding favor in foreign countries and the wonderful strides American manufacturers are making in the development of the automobile industry tend to the belief that in the next year or two American automobiles will be found in every civilized country on the globe.

#### WANAMAKER HAS THE FORD

New York, Jan. 12.—W. D. Gash, general manager of John Wanamaker's automobile department, announced yesterday that he had closed a contract whereby the great New York and Philadelphia department store would make the Ford machines a part of their line. Last year John Wanamaker handled the Ramblers, another unlicensed make.

## THE READERS' CLEARING HOUSE

### AIR-COOLED MOTOR LIMIT

Groton, N. Y.—Editor *MOTOR AGE*—What horsepower would be developed by a four-cylinder, air-cooled motor of  $3\frac{1}{2}$  by  $4\frac{1}{2}$ -inch bore and stroke, running at 700, and also at 800 revolutions per minute? Would such a motor be practical if fans were used to increase the air draft. How far apart and of what depth should the radiating ribs on the cylinder be? Would it be practical to make such a motor of 4-inch bore and  $4\frac{1}{2}$ -inch stroke? The motor will be placed in front under a bonnet. The cylinders will have the valve chambers on the side and with a cylindrical head.—W. E. N.

The four-cylinder,  $3\frac{1}{2}$  by  $4\frac{1}{2}$ -inch motor would develop about 10 horsepower at 700 revolutions; while at 800 revolutions it would develop about 11 horsepower. Air-cooled motors of this size have been used with success, even without fans. The depth and distance apart of the radiating ribs depends entirely upon their construction. If cast on the cylinder they should not be over  $\frac{1}{2}$ -inch deep and should be about  $\frac{3}{8}$ -inch apart. An air-cooled motor of 4-inch bore and  $4\frac{1}{2}$ -inch stroke is somewhat larger than, according to the rules of ordinary practice, is supposed to be practical, unless some especially efficient means of cooling are used.

### FINDS ONE GOOD AGENT

Pittsburg, Pa.—Editor *MOTOR AGE*—The letter from "Jersey" in your issue of December 17 is so in line with the experience of so many purchasers, that we are sometimes prone to believe the ranks of both makers and dealers in motor vehicles are entirely made up of sharks. It is encouraging therefore to be able to record an occasional instance of the other kind, to show that there are some in the business disposed to act with business common sense, and to so conduct themselves as to make satisfied customers who will be the means of bringing them others. As an example of such I wish to report my recent experience.

Early in August last I bought a touring car of a new make, being the first of its model to come to this city. The makers had been building smaller cars for 2 or 3 years, and general experience would naturally make one cautious of buying one of the first of a new model, which was entirely different in design from previous ones from that factory; but the general reputation of the concern for honest, conscientious work was so good, that after a 20-mile trial over a rough, hilly country road, I made the purchase. The second day I found a nail in a rear tire, and being close to the shop of the agent from whom I bought the car, had his men patch the puncture. I started again as soon as they pumped it up, and got about 5 miles away, when I found the same tire flat. I had no jack, it was a very hot afternoon, and I concluded the easiest thing was to run in on the deflated tire, and let it go to pot. If I had possessed any sense, I should have at least tried to pump it up and see if it would hold enough to run a little way while it leaked down again; but that did not occur to me, and I just bumped along back to the shop. On arrival there the cover looked so bad that I told them to put on a new tire complete, shoe and inner-tube, and took a trolley car home to dinner.

When I returned to get the car in the evening, they had put on a shoe of the same size and make, but of lighter section, having the word "front" molded on it. They said it was the only one of the make they had on hand. I started for home, but about two blocks before reaching there that tire went off like the crack of a pistol! I went straight on, and put the car in barn for the night. Next morning I telephoned to the shop, and they sent over a man in a runabout with another complete tire, shoe and tube, of the same size, but from a different rubber works. This he put on, and neither it nor any of the other tires has been touched since, except to pump a little air in all around about twice. I was rather anxious about the charge for all this, but when the monthly bill came it was for one shoe and tube at list prices, and \$6 for "repaired shoe." This latter turned out to be the original shoe, on which I had run in flat, which they had sent to factory and had fixed up, and is now waiting as a spare, ready for an emergency. No charge was made for the tire which burst, or for sending to my house and putting on the last tire.

When I had owned the car a little over 2 months, the endurance run arrived here from New York, and among the mud covered cars were two of this model of mine—one of these, though "official" was not competing—both of which had arrived on time at every control, thus endorsing my judgment in selecting this car. As I stood in the garage inspecting the tough looking rigs, the proprietor came up and invited me to bring in my car, and some of the factory hands who had come through the run would put me in a new pair of bevel driving gears. On asking what for I was told that in their home city some careless operator had succeeded in knocking a tooth out of one of those gears, and so the makers felt that it would be better to replace the gears on all the cars so far put out, to insure against breakage. The old gears were taken out, clean and perfect, with no sign of wear, and others substituted with about  $\frac{1}{2}$ -inch more face added on the big end of the gears, increasing their strength by a very large percentage.

I then continued to run the car until freezing weather and my poor health combined to make me lay her up. Last Saturday I chanced to meet that agent and again he invited me to run the car in and have another part replaced free. I forgot to mention that no charge was made either for the new gears or for time spent putting them in place. This time it is the first shaft of the sliding gear transmission. The pinions for the first speed forward, and for reverse, having only thirteen teeth are of course quite small, and being keyed on the shaft, there is not much of the latter left. It seems that someone, in some other city, had broken a shaft at this point, so the makers now send me a new shaft, having these two pinions cut out of the solid forging, to avoid the possibility of such a mishap to me.

I would just mention that I have run this car many hundred miles over western Pennsylvania hills, on roads where a dozen shifts of gear are often necessary within a single half-mile. I had no previous experience with sliding gears, and doubtless gave it much abuse

in learning how to make a clean shift, yet neither that shaft nor any other part of the machinery has given the first sign of weakness, or of undue wear, and I have never had to leave my seat on the road to make a single adjustment, or even to look at a plug or a wire.

The action of this maker in voluntarily replacing any part he may come to think weak, before it has time to break and disgust the purchaser, is really only business sense, yet the majority of makers can't see it, and instead adopt the course of charging their customers outrageous prices for replacing parts which have broken through poor design or material. The latter class may have more money at the end of the first year's business, but they will be hunting other employment when the first class is supplying the trade in years to come.—B.

### HEATING MOTOR CAR STABLE

Worcester, Mass.—Editor *MOTOR AGE*—I wish to heat the room in which I keep my automobile, that the water in the motor cooling system may not be frozen when the machine is standing. Will there be danger in heating the room with a small gas stove. The gasoline supply is stored outside the building and the tank on the car is filled outside, there being no gasoline in the room except that in the tank.—E. K. TOLMAN.

The danger of an open fire in a room of this kind would exist through the liability of leakage of gasoline from the tank, piping or carburetor of the car. The safe way is to heat the room by steam, hot air, or hot water. The open flame would of necessity be near the floor and as gasoline vapor is heavier than air, it is plain that should there be gasoline vapor in the room it would settle to the bottom of the room.

### DIFFERENTIAL FOR DOUBLE DRIVE

Winchester, Mass.—Editor *MOTOR AGE*—What kind of differential gear is used when a car is driven by two side chains? What is its position on the rear axle?—A. W. HAWES.

When a double side chain drive is used the differential is not placed on the rear axle, as this is stationary, with each rear wheel running loosely upon it. The differential is upon a cross counter shaft back of the transmission gear and driven directly from it. The differential in this case may, of course, be of either bevel or spur gear construction.

### YEARLY MODEL QUESTION

Clyde, O.—Editor *MOTOR AGE*—I have just read with a good deal of interest a letter from the Winton Motor Car Co., published in your issue for December 24. To say that I endorse every word of it would be expressing it mildly. How anyone who has had a reasonable number of years' experience in manufacturing business can take another standpoint is a mystery to me. Take the case of a prominent steam carriage concern of some years back which, while it made an excellent machine adopted a policy directly opposite to that explained in the letter referred to. It was its boast that it never waited a minute to place an improvement on its carriage. In order to do this it ran the vehicle through the shop in small lots of, I believe, ten carriages each. The result was that while the product of this firm was well liked it did not take long for it to get into financial difficulties, from which the company never recovered.

A manufacturer who is wise never attempts to put an improvement upon the market until

it has been given a long and severe test. To test an improvement at the expense of customers is, in the present state of manufacturing business, suicidal. I knew a case where the entire 3 months' product of a large typewriter concern had to be recalled for this very reason, not only at a loss and the expense of making the changes but the loss of practically all of these customers and of their prestige in the market. This was a concern manufacturing other small articles of a similar nature and should have known better.

What the Winton company says about leaving the inventor and designer untrammelled with the knowledge that he must get a certain improvement out in a certain time has its foundation in solid fact. Discoveries like the effect of the Roentgen ray may be made by accident but usually they are the results of painstaking and expensive research. Now take the matter of the yearly model. In an up-to-date establishment every part is made with jigs and templates. These tools require the highest class of mechanical skill and are costly. To change the position of a hole or the size of a certain projection on a part usually requires an expensive change in the jigs and quite often an entirely new one has to be made. While waiting for this change the progress of this part of the work must come to a standstill. As the Winton company remarks, there is a busy season and a dull season in the manufacture of automobiles. In the fall of the year very little is doing in the average automobile factory, that is the time when every man can be put on jigs and tools for next year's work. In the spring and summer these men are needed to turn out the product. The manufacturer must keep his eyes open to make both ends meet.

It is an exceedingly profitable manufacturing enterprise that will prosper under mismanagement and I believe that the manufacturer will agree with me that the automobile business is not one of them. Therefore the manufacturer who plans his year's work ahead lets his contracts in January or earlier for such work as he must have done outside his factory and who sticks as closely as possible to the model decided on before beginning the season will make money, where a man with an equally good machine and with an equally good trade who is continually changing will be a bankrupt before the end of the season. These remarks of mine are by no means a pipe dream but the result of experience as a mechanic in the shop and as a designer and mechanical engineer.—E. W. ROBERTS.

#### WATER AND AIR COOLING

Huron, S. Dak.—Editor *MOTOR AGE*—Will you kindly tell me through the Readers' Clearing House what are the good and bad features of water and air-cooled motors? What should be the bore and stroke of a four-cycle, single-cylinder motor to develop 8 horsepower at 1,300 revolutions per minute?—F. L. CLASS, M. D.

The chief disadvantage of the air-cooled motor is the liability to ineffective cooling when the motor is running under hard conditions, such as in hill climbing and in driving over rough or muddy roads—conditions which require the full working capacity of the motor without the benefit of the cooling air draft of fast running of the car. Some of the various builders of cars with air-cooled motors have devised cooling systems which, it is claimed, overcome this difficulty. The performance of the new models of air-coolers and of the entirely

new cars of this class, will be watched with considerable interest during the coming season, as the advocates of this construction claim that the development of the air-cooled motor has reached a stage of practicability, even in the case of comparatively large cars. The water-cooled motor provides a surer method of motor cooling, but adds the complication of a water circulating system; the danger of water freezing in the winter and the danger of overheating the motor by running when the pump is out of order and the water not in circulation. A single-cylinder motor to develop 8 horsepower at 1,300 revolutions would be of 4½-inch bore and 5½-inch stroke.

#### OIL IN GASOLINE

Towanda, Pa.—Editor *MOTOR AGE*—Do you know of any lubricating oil which is used to lubricate gasoline motors by being mixed with the gasoline? Is the Edison Storage Battery Co. in a position to make shipments of its batteries?—A. D. SPENCER.

Lubricating motors by mixing oil with the gasoline has been tried in the case of small motors, such as those used on motor bicycles, and some users have reported it successful. Others, however, have been unable to obtain satisfactory results. If the varying results lie in the kind of oil used, nothing but a line of experiments with different lubricating oils can determine the best oil to use. The Edison Storage Battery Co. is not selling batteries. Just now it is sending batteries to different electric carriage makers that the latter may give them extensive trial before the batteries are placed regularly upon the market.

#### HORSEPOWER OF MOTORS

Fairfield, Ia.—Editor *MOTOR AGE*—What is the horsepower of a vertical, two-cylinder automobile motor of 4½-inch bore and 5½-inch stroke, running respectively at 800, 900 and 1,000 revolutions per minute? What is the limit of motor speed?—D. TURNER.

At 800 revolutions the motor would develop 11 horsepower; at 900 revolutions 12 horsepower, and at 1,000 revolutions, about 14 horsepower. The limit of motor speed is dependent upon the limit of piston velocity. It is generally conceded that 1,200 feet per minute is the absolute limit of piston velocity. To determine the motor speed in revolutions, for a given piston speed, multiply the piston velocity in feet by six and then divide by the piston stroke in inches.

Toronto, Canada—Editor *MOTOR AGE*—What horsepower will a double, opposed cylinder motor of 4-inch bore and 5-inch stroke develop at 1,000 revolutions per minute?—H. J. COLLINS.

This motor would develop about 10 horsepower at 1,000 revolutions.

#### TWO-CYCLE MOTOR PATENTS

Indianapolis, Ind.—Editor *MOTOR AGE*—In *MOTOR AGE* of March 5, 1903, several different forms of two-cycle motors were illustrated. Is the one shown in diagram F patented? If so what is the name of the patentee and the number of the patent? Who builds this motor?

The motor in question may or may not be patented in this country. A search of the patents would be required to determine just what of its features are protected by letters patent. Almost every known form of internal combustion motor is patented in some way or another, either by specific patents covering certain features of construction, or by broad patents referring to the general prin-

ciple of operating. *MOTOR AGE* does not know of anyone building this motor for general sale. Motors substantially like it in principle have been made and used for marine and automobile work by several different people, both in this country and in Europe.

#### GRADE PER CENTAGE

South Omaha, Neb.—Editor *MOTOR AGE*—I have a Milwaukee steam car. Freezing of water in it caused the bursting of the cross head water pump. Where can I get a duplicate? What is a 10, 15 or 25 per cent grade? How is the word *chaffeur* pronounced—*sho-fe*: *sho-feur*, or *shafert*?—T. B. DRAPER.

Wt. you may not be able to get an exact duplicate of the broken pump you should be able to obtain from almost any of the jobbers of automobile parts and appurtenances a pump which may be adapted to the car. The best course is to write to some parts house, giving full specifications of the pump. Grade percentage is determined by dividing the rise of the grade by the level distance in which this rise occurs. Thus a hill in which there is a rise of 25 feet in 100 feet would be a 25 per cent grade. *Chaffeur* is pronounced *sho-feur*, with about an equal accent on the two syllables.

#### USE OF PIERIC ACID

Sewaren, N. J.—Editor *MOTOR AGE*—I have a gasoline launch fitted with a Palmer engine. Is there any danger of pieric acid, used with the gasoline, corroding a galvanized iron tank?—HENRY S. EDDY.

*MOTOR AGE* does not believe that the pieric acid would have any chemical action upon the galvanized iron.

#### RECENT INCORPORATIONS

Buffalo Garage Co., of Buffalo, N. Y.; capital, \$30,000. To manufacture, sell, rent and store automobiles and other motor vehicles. Directors, George H. Smith, Benjamin F. Milson and Byron D. Shultz.

Worthington Automobile Co., of New York; capital, \$200,000. Directors, C. G. Worthington, of Shawnee, Pa.; W. J. P. Moore, of New Britain, Conn., and H. R. Lounsbury, Jr., of New York.

Shultz-Howard Co., of Knoxville, Tenn. To deal in automobiles, launches and gasoline engines. Incorporators, Edward Shultz, Henry Howard, B. R. Stout, L. C. Gunter and W. M. Miller.

Marion Motor Car Co., of Indianapolis, Ind.; capital, \$60,000. Incorporators, Robert H. Hassler, J. A. Little and I. G. Bosler.

#### FOREIGN EXHIBITS AT ST. LOUIS

According to information received from A. Darracq, president of the French Automobile Board of Trade, France will have forty exhibitors in the automobile, cycle and accessories section of the St. Louis fair. The principal exhibitors will be: Automobiles and motor cycles—Darracq, Poullard, Mors, Panhard, Gardner-Serpollet, Renanet, de Dietrich, Georges Richard, Cohendet, de Boisse, Turpin-Foy, Gallia, Griffon. Accessories—Ducellier, lamps; Mallevet-Blin, parts; Michelin, tires; L. Gignoll, lighting instruments; Falconnet-Pereaud, tires; Hannyover, parts; Aster, motors; Botiaux, automobile bodies; Vauzelec, parts; Edeline, tires; Bergougnan, tires; Porsy, steel frames.

It is safe to presume that styles in bonnets and trimmings will be thoroughly discussed at the forthcoming shows.



# MOTOR BOATS



## WEST IS AROUSED

The development of the automobile boat in the east has had its effect, and the west, not to be at all behind times, has already taken to the new state of affairs in power boat matters. Already a number of Chicagoans, who, until their plans are more mature, prefer their names be withheld, are planning to go into the game and to either have their boats constructed in some well equipped boat shop or to establish a plant of their own. They are figuring on making their own motors, although even these may be made outside, but, as in the case of the hulls, on special lines and particularly designed for the work intended. The instigator of the new company states that already three conditional orders have been received and this with only the bare announcement that such a plant is to be established.

It is the plan to at first make only one model, about a 30-foot boat, with from 40 to 50-horsepower motor, which it is estimated will give a very satisfactory speed and yet permit of the building of a boat that will have considerable seaworthiness and carrying capacity. The promoter, in speaking of the proposition, said: "I have found that there are enough well-to-do men in this part of the country who will buy a power boat, if the price is right, and if something can be produced that will prove reliable and at the same time permit a person to get somewhere without spending a whole day in doing so. It has been pretty conclusively demonstrated that the heretofore jangling launch can be greatly improved in the matter of speed, which will retain its comfort, reliability, and ease of handling, and at the same time have sufficient safety in a reasonable sea and not be extravagant in operation. Such a craft ought to find purchasers among men who have elegant places on the numerous lakes in the west and northwest, as, for instance, Geneva lake, where there are hundreds of boats, not one of which will pass the 10-mile mark."

## TURN TO AUTOMOBILE BOAT

Reports from many sections of the country, particularly the east, where hundreds of boat builders exist, are to the effect that the advent of the automobile boat has completely upset some factories and that the new order of things has been the occasion for a complete transformation in design of boats and motors as well. It is unquestioned that in the east, more particularly, there is a desire for speed, inasmuch as distances to be traveled by boat are generally longer than in other parts of the country, and the automobile boat meets a demand not reached by the ordinary launch. Two or three concerns along the Connecticut river have practically abandoned the ordinary type of launch and will devote their entire attention to

manufacturing the later type of craft. Except in very small launches, say from 15 to 25 feet, there is a tendency to not only do away with the two-cycle motor, but to equip nothing but multicylinder engines, and particularly those of the automobile type, on account of their high power and extreme lightness. It is conceded that the two-cycle motor is a most satisfactory affair for small power and that it is blessed with simplicity, so that for the small craft this type will probably find favor for some years to come.

## INTEREST GROWING ABROAD

In comparison with last year's display of motor boats in Paris, this year's exhibition was a revelation, not so much in the way of novelties or models, but in the large number shown. It was noticeable that opinions differ as to design in motors, hulls and propellers. One point seems to have met a more or less general view and that is that so far the slow speed motor has stood the service better and that propellers do not work satisfactorily when rotated too fast. Manufacturers abroad seem to be almost unanimous in the opinion that racing events have been the direct cause for the growth of the motor boat trade. While the first races of boats fitted with a motor were given about 14 years ago, it was only during 1903 that real racing on a very large scale took place.

## MOTOR BOAT HULLS

Reading, Pa.—Editor *MOTOR AGE*—The increasing interest in automobile motor boats leads us to believe that a marked change in the shape of hulls will be found necessary in the near future, particularly as this class of boats is much used on still waters. In experimenting with high speed small boats the writer has frequently been met with the assurance that it was impossible to drive a short hull

been shown by equipping small launches with high gasoline power of light weight proves the fallacy of such limitation. Most high speed boats, however, have been quite long in proportion to their beam; a condition undoubtedly conducive to speed, but not conducive to handiness, and so not of interest to the buying public at large.

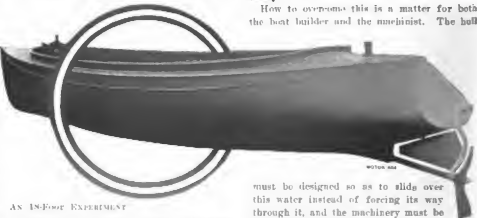
It is one thing to produce something that will give high speed and yet be of no earthly use, or in other words a freak; and another thing to produce an article that meets the needs of the public; and this latter object should be kept in mind and worked for rather than the former. This applies not only to motor launches, but to automobiles. It is not difficult to build a freak racing machine and make great speed with it, but nothing has been gained or accomplished when it has been done. If the motor launch is to open a wide field for itself, it must be safe, suited to average waters and handy, by which is meant easy to handle, both as to its mechanism and its ability to maneuver.

The man who buys a boat for family use insists on having liberal beam, so that it may be roomy, pleasant to ride in, and free from danger of capsizing, but does not want a long boat, for this is more trouble to keep in repair, requires more space to turn around, and is not nearly so handy as the shorter one, while the expense of maintenance is greater.

The writer's idea of a family boat for daily use is an open or half covered launch, less than 25 feet long and 4 to 8 feet beam; commonly called "a tub." Manufacturers will doubtless find call for such boats, if capable of high speed, and to get these results a different design seems necessary. The short, broad boat, as now built, piles up a mass of water at its front end, while the enormous power with which it is equipped draws the water from under its rear end and piles it up in massive waves a few feet behind. Unless one has actually measured the effect of such a combination, he does not realize what a short, high powered boat must work against in its effort to make speed.

Some experiments were made with an 18-foot launch, equipped with about 10 horsepower, and many trials showed that at a speed of 9 or 10 miles per hour, the water against the forward end was at least 1 foot higher than the water under the rear, 10 to 12 feet away. In other words, this launch was obliged to climb an 8 to 10 per cent grade while making 9 or 10 miles an hour, truly a creditable performance, but one that should be unnecessary.

How to overcome this is a matter for both the boat builder and the mechanic. The hull



AN IN-FOUR EXPERIMENT

more than about 30 feet, by which was meant 6 or 8 miles an hour. This limitation seems wholly uncalled for, and the results that have

must be designed so as to slide over this water instead of forcing its way through it, and the machinery must be so placed as to relieve, if possible, the settling of the water level at the rear. One of the most ready ways of accomplishing

these results seems to be to widen the stern, so as to increase the amount of support at that portion of the boat and to place the propeller well to the rear, with the shaft projecting somewhat downward, so as to avoid drawing the water from under the rear end.

The illustration herewith shows one of our recent launches in which this arrangement has been employed with fairly satisfactory results. Demand for still higher speeds, however, for shorter boats will call for more power and a still farther departure from established lines, and if we can but get designers to study this problem satisfactory results will undoubtedly be obtained. Since almost any desired power can be obtained in a light form by the use of the internal combustion engine, it is not a question of how fast a  $\frac{1}{2}$ -horsepower motor can push a six-passenger hull, but how fast an 18 to 25-foot broad-beamed hull can be driven with the new power which may be had in amounts as wanted, and this is what calls for the decided change in design.—CHAS. E. DURYEA.

#### AMERICAN ASSOCIATION WAKES UP

New York, Jan. 12.—At a meeting of its executive committee the American Power Boat Association decided to offer a perpetual challenge trophy valued at \$1,000, open to motor boats belonging to any recognized yacht club in the world, except that such club, if located in this country, must be a member of the association. Boats must rate not less than 35 feet under the measurement rules of the association. It has been decided to hold a match, consisting of three races, on

June 23, 24 and 25, starting and finishing off the Columbia Yacht Club house, on the Hudson river and Eighty-sixth street.

Boats must be entered by the clubs to which their owners belong, not more than one boat from each club. Entries will be received up to June 13, at the office of Anson B. Cole, 63 Wall street. All contesting boats must be measured under the association rules by the association's representative, prior to the first race. The winning boat will be determined by the point system, whereby each contestant is allowed one point for going over the course, and an additional point for each boat which she defeats, all boats starting in one class and at the same time, corrected time to be computed in accordance with the association time allowance tables.

The club by which the winning boat is entered is entitled to hold the cup, subject to provisions of a declaration of trust, until it is challenged for and won by a boat of another club.

Full particulars can be obtained from any member of the committee composed of J. H. Wainwright, American Yacht Club; M. J. Gkelow, Atlantic Yacht Club; E. B. MacMillan, and Anson B. Cole, Manhasset Bay Yacht Club.

The annual meeting of the association will be held at the Hotel Spalding, Forty-third street, between Sixth avenue and Broadway, February 3, at 8 o'clock in the evening.

Some definite action was taken in regard to the proposed race of the association during the coming season. The first races will be held under the auspices of the executive

committee on Memorial day, and will be open to all boats which are enrolled in the association. The race will be open to all classes and will be held in Manhasset bay. The course for the large boats will be from the same starting line out into the sound and return. For first, second and third prizes the association will award its pennant to the winner in each class and the winner will be entitled to fly this pennant as the winner of his class during the balance of the season.

#### MOTOR BOAT NOTES

Another fast boat has made its appearance at the waters around New York. It is called the Zip Along and was built by the Gas Engine & Power Co., of Morris Heights, N. Y.

An interesting discussion on automobile boat racing occupied most of the time at the last gathering of the Automobile Club of America and it was the general opinion that the American Automobile Association should take the new sport under its wing. Such notable advocates of motor boat racing as C. H. Tangeman, E. B. Gallaher, E. T. Birdall and C. H. Gillette, were in attendance at the meeting, as was President Scarritt, who thought it probable that the Automobile Club of America would soon establish a motor boat membership division. It is generally understood that A. R. Pardington, chairman of the racing committee of the American Automobile Association, is opposed to touching the boat question at all, believing it is in good hands when in charge of the American Power Boat Association, whose purpose is solely in this direction.

## METROPOLITAN GARAGE NOTES

Diamond tires were used on the Packard racer when it covered its mile in 46½ seconds in Florida recently.

A class for automobile instruction will be established by Harrison S. Colburn, educational director of the west side Y. M. C. A.

George F. and Lee W. Woolsten and W. P. Brew, members of the new firm of Woolsten & Brew, who will handle Thomas and Stevens-Duryea automobiles at 152 West Fifty-sixth street, formerly handled Corlies engine in this city.

Walter C. Adams, president of the Crest Mfg. Co., was in New York a few days last week, visiting the Crest branch on Thirty-eighth street. He reports an excellent outlook for the air-cooled type of motor, which is original with Americans.

F. A. LaRoche has entered his remodeled racer of last year in the open race at the Florida tournament. The new car, which has proven itself to be very fast, has been nicknamed the Blue Streak. Incidentally Mr. LaRoche has volunteered to supply a couple of official cars for the newspaper men at the meet.

An Orient buckboard was sold last week to General Bruce by E. J. Willis, the agent for the machine in this city. The little machine is to be used by Mr. Brice's 13-year-old son, who after a few trials easily mastered the simple mechanism. Mr. Willis told a Motor Age representative he had orders on his book for sixteen of the 1904 models.

Handsome and commodious quarters have been secured by M. L. Bridgeman at 20 West Sixtieth street, where he will have a garage and also sell machines of reputation. Mr.

Bridgeman, apart from his experience in the bicycle trade, has been in close touch with automobile matters since the automobile trade was worth talking about.

Recent buyers of White cars from the eastern branch on Forty-eighth street and Broadway, where Manager Deming holds forth, are D. H. Loughran, Brooklyn; Robert Scoville, Charles L. Rieh, Robert R. Logan, Howard Gibb, J. Ferrell, E. D. Tomkins, I. N. Phelps Stokes, H. B. Moore and William J. Idin, of New York. The arrival of the 1904 tonneau was reason for the busy appearance around the garage.

At the Baker agency in this city, it was said last week that W. C. Baker has decided to enter the Florida races with the Torpedo Kid, which, although of the same design as the famous Torpedo, is about a third smaller. It is believed the new machine can supply a mile in close to 40 seconds. It will be remembered that at the Staten Island tournament it was going at the rate of a mile in 48 seconds, with only half its power, when the accident happened.

Alex. Schwalbach, well and favorably known in the bicycle and automobile trade, has been appointed the Brooklyn agent for Winton motor carriages. Probably no man is better fitted to look after product than Mr. Schwalbach, whose wide acquaintance and a thorough knowledge of automobiles is well known. In addition to his present place opposite the Willik entrance of Prospect park in Flatbush, he will have an additional sales room in the business district.

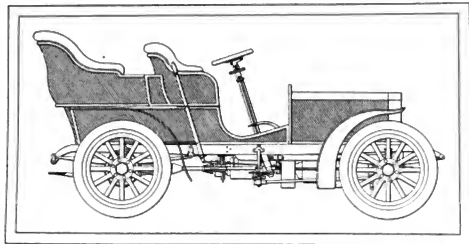
On his way to Detroit, S. D. Waldon of the Packard Motor Car Co., stopped at the local

branch to tell Col. Pardee of the mile made by the Gray Wolf over the Daytona-Ormond course. Mr. Waldon thought it not improbable that his company would build a machine of greater power and greater speed than the Gray Wolf. The recent fast mile has given boom to American machines in general, and to the Packard machine in particular. This company can hang a sign at the show which can state that it is next to the fastest machine in the world, while the fastest machine is one of 85 horsepower.

Ever on the alert to increase his business, Charles E. Miller, the enterprising New York jobber of automobile and bicycle material, has leased the properties 318 and 320 North Broad street, Philadelphia, from January 1, and will open a Philadelphia branch there as soon as he can get things in shape. From this branch he will conduct both a wholesale and retail business. It is his intention to make elaborate improvements in this store, and make it the most attractive of its kind in the country. As there are large show windows in the front of these stores he will have an excellent opportunity to make a fine display and he intends to treat Broad street promenaders to an automobile show of the continuous performance order. The same energy and business acumen that have brought him such a large measure of prosperity, both in his main salesrooms at 97-101 Reade street, and his retail branch at Thirty-eighth street and Broadway, will undoubtedly crown his Philadelphia enterprise with unqualified success. Miller is a great hustler during the New York shows and expects to out-do himself at this one.



# AUTOMOBILE DEVELOPMENT



MOTOR AGE

THE FOUR-CYLINDER PIERCE ARROW

## FOUR-CYLINDER PIERCE ARROW

The George N. Pierce Co., of Buffalo, has added to its line of cars a four-cylinder rig which will be known and classed in the Arrow type, making the entire line to consist of three machines, the two Arrows and the stanhope. The latest Pierce rig will come in the larger class of motor vehicles, weighing, in full running order, 2,400 pounds, with a motor which the company says shows 28 horsepower on a brake test, but which is rated at 24 horsepower.

The body is of the king of the Belgians type, with seating capacity for three in the tonneau, while the front seats are of the individual pattern.

The under frame is made from pressed steel, and sufficiently long to give a wheel base of 93 inches, the trend being standard. Thirty-four-inch wheels, with 4-inch tires are used, and heavy rubber buffers are provided to limit the spring deflection. The springs are made long—48 inches rear and 38 inches front—to insure easy riding and the front springs are so hung that they cannot turn and interfere with the steering gear.

The car is provided with two hub brakes, effective when the car is run in either direction, while the counter shaft is also provided with a brake, both brakes being so connected with the clutch that when the brakes are set the clutch is released. The steering is by wheel, with pinion and toothed sector, both made from steel, the steering levers being self adjusting by means of springs and ball bearings.

The front axle is tubular and dropped to clear the crank shaft extension, while the steering rod connecting the front wheels is placed back of the axle.

The cylinders are made interchangeable, while the mechanically operated inlet valves are made interchangeable with the exhaust valves.

The motor does not have the usual hand-operated throttle lever; instead, a governor entirely controls the speed of the motor and the tension on the governor spring can be varied from the seat. There are only two hand levers beside the speed shifting lever. One is the spark lever and the other is the governor regulating lever, which works in a notched quadrant. This operates on the spring against which the weighted arms of the governor act, and when the spring is under the least compression the motor is controlled to 200 revolutions.

If a hill is to be ascended the governor will open the throttle. In this way the manipulation of the carriage is rendered simple. As the governor regulating lever is advanced the speed of the engine increases, giving any intermediate speed, it is claimed, of 6 to 45 miles an hour on the high gear, the spark being advanced so as to fire earlier, as the speed increases. When the regulating lever is put in the most advanced notch, the governor spring is clearly compressed, thus cutting out the governor and keeping the throttle open. The carburetor is entirely automatic in action and no hand lever is provided for regulating it. As the speed of the engine increases, more air is taken in and as the speed decreases the air is automatically shut off in proportion.

The gears on the exhaust and inlet cam shafts run in oil tight cases. The exhaust valves are on one side of the engine and the inlet valves on the other. The same gear operates the connections to the commutator, circulating pump, oil pump and fan. The governor is fitted on the end of the inlet cam shaft and is enclosed in an oil tight case. The shaft drives the commutator, which is placed in front of the machine.

Lubrication is by means of a plunger pump, pipes leading to the three crank shaft bearings, the oil passing through the hollow shaft to the crank pins, from which it is thrown to the pistons.

The lower part of the crank chamber may be removed, leaving the crank shaft in place in its bearings, which may be adjusted and

making available full inspection of all bearings.

The covers over the inlet and exhaust valves are simple. The brass cap is a loose fit in the thread so it can readily be unscrewed by the fingers. A set screw may be given a turn with a wrench, when it will bind the cast iron plate with an asbestos filled copper gasket on its seat.

The motor and transmission box are supported on a separate angle steel frame, so that springing of the main frame will not affect alignment. The motor has six feet cast on the upper half of the crank case and the transmission case has four. When these parts are ready for assembling a lining-up shaft is passed through the crank shaft and transmission bearings and the starting handle bracket. The ends of this shaft are supported at such a distance from the frame that about 1/4-inch of space is left between the feet and the angle bar supports. When every part is in alignment, clay is put around the feet and the spaces are filled with Babbitt. The holes are then drilled through for the holding-down bolts.

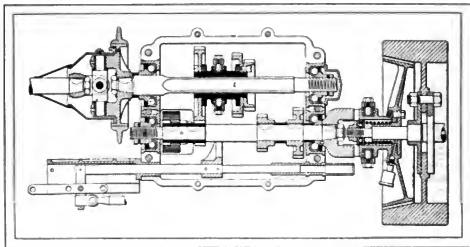
A propeller shaft transmits the power from the transmission gear to the bevel pinion shaft. The two universal joints are made liberal in proportions and are enclosed in oil tight cases, while the bevel pinion shaft is fitted with large ball bearings. The transmission gear has ball bearings, also the front and rear axles.

A sheet aluminum cover is placed under the motor and extends to the transmission case, making these parts practically oil tight and dust proof. The speed change lever is on the steering column. The clutch must be disconnected before the gears can be shifted and the clutch cannot be put in until the gears are in mesh.

The dimensions in the Pierce four-cylinder car are as follows: Wheel base, 7 feet 6 inches; track, 4 feet 8 inches; wheels, 34 inches; tires, 4 inches; under frame, 3 1/2 inches deep at center, 2 1/2 inches at end, 3-16 inch thick, 1 1/2 inch flanges, width 34 inches; exhaust and inlet valves, 1-7/16 inches; cylinders, 3 15-16 by 4 1/2 inches; gear ratios—high, direct, intermediate, 1.88 to 1; low, 3.3 to 1; reverse, 3.3 to 1; bevel gear, 3.3 to 1.

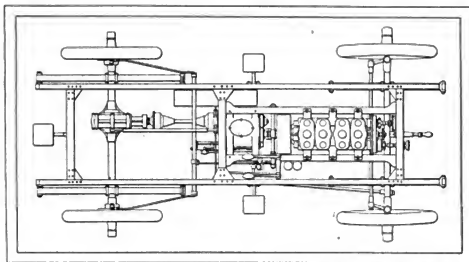
## FAVORS THE STEAM CAR

The outlook in the steam carriage industry at the opening of the present year shows a gratifying improvement over that of a year ago in various ways. The market at that time was suffering from the collapse and withdrawal of numerous concerns which had en-



MOTOR AGE

THE PIERCE TRANSMISSION GEAR



PLAN VIEW OF PIERCE FOUR-CYLINDER CHASSIS

tered the business with insufficient backing and a very imperfect realization of the seriousness of the work they had so cheerfully undertaken. The notion that, because steam is the accepted and universally understood prime motive power in other lines of work, any combination of running gear, boiler and engine would be good enough to sell and to run, grotesque as it now seems, found sufficiently wide acceptance to work serious injury, the effects of which it will take several years of hard and successful work to live down.

It would, of course, be unjust to lay the entire responsibility for the conditions alluded to on the manufacturer. When the steam carriage was at the height of its late boom the distinction between the runabout and the touring car was as yet hardly thought of. People bought steam carriages weighing anywhere from 600 to 1,000 pounds, with all the defects of an art barely out of its eggshell, fresh upon them, and, after a week or two of instruction, started on tours across the state. If they got home with most of the pieces of their rig still in place, they concluded that the steam carriage would stand most anything, and therefor treated it accordingly. If they left most of the pieces along the road, the steam carriage was no good, and they told all their friends so.

Happily the last 12 months have been the situation alleviated to some extent. The purchaser who wishes a runabout can, if he is willing to look around, select a serviceable machine; and when he has it he will probably have sense enough not to abuse it. If he wishes a touring car he is no longer compelled to look to the gasoline vehicle market for either reliability or durability. The engineering end and the selling end of the steam carriage business at length find themselves in approximate equilibrium, and the best selling machines today are those in which the design and construction are the most carefully worked out.

It is possible today to say that, in all probability, the future lines of development of the steam carriage will for some time to come follow the lines marked out during the last year or two by the most progressive builders. This belief is supported by the fact that the opening of the present year offers few if any radical novelties. Improvements in detail there are, and these are sufficiently numerous to show that the present condition indicates intelligent alertness rather than stagnation. What especial forms competition and the

search for improvement will bring, one would, no doubt, be rash to attempt to prophesy. Certain things, however, may be specified as the most desirable in the light of present experience. As steam engineering is long past its infancy, some of these will hold good as long as steam is used. Others are subject to improvements in the mechanical devices for generating and using steam.

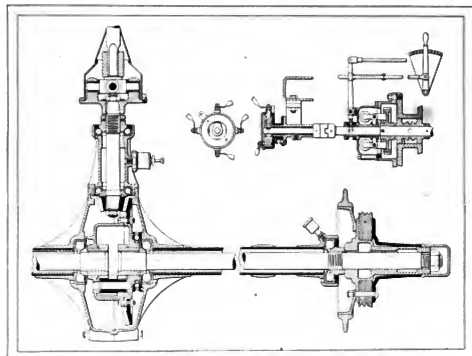
In an automobile, fuel economy is essential. The steam must therefore be introduced into the engine at the highest practicable pressure, and must be expanded as much as possible. A disposition to use boiler pressures of 300 pounds and over is already recognizable among the makers even of light machines. Although only one steam machine now uses a compound engine, the logic of the situation is so obvious that it can hardly be avoided much longer. With both simple and compound engines, the loss of heat, due to cylinder condensation, is considerable enough to deserve more than the perfunctory attention it sometimes receives. Heat applied in superheating the steam is never wasted if the steam can be sufficiently expanded, and it may profitably be taken for this purpose, not merely from the waste gases

above the boiler, but in certain cases from directly above the fire. For both touring cars and runabouts the peculiar simplicity and the absolute impossibility of explosion or damage which distinguish the flash system make it, in my opinion, without a rival.

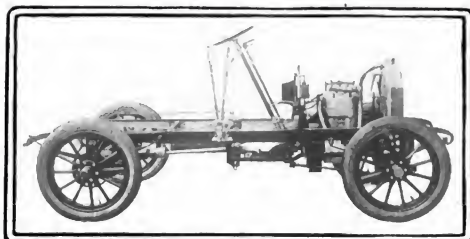
In addition, this system lends itself with especial facility to the high working pressure and superheating, essential to economy; and in a touring car the advantage of fuel economy is too important to be overlooked. Furthermore, a sparing use of steam permits the use of a condenser without unsightly appearance, and the ability to run all day on one tank of water is as convenient in its way as a small fuel consumption.

Turning to the more strictly mechanical features, it would seem that the principal step regarding which a unanimous sentiment seems likely before long to be reached is the substitution of straight gear drive for the chain. The advantages of this construction are so manifest that the change is not likely to be long delayed. Regarding the other parts of the car, one can only say that the result of patient and steady improvement in small details has vindicated the practicability of many things whose early imperfections caused them to be hastily and unjustly condemned. Among these may be noted the burner, the vaporizer, the pumps and the use of ball bearings in the engine and axles. In spite of the prejudice created against ball bearings by crude methods of construction, they are steadily gaining ground and no doubt will eventually be used in all the important working parts where there is continuous rotation.

Lubrication is receiving an increasing degree of attention. Mechanical feed and splash lubrication are now the accepted standards where oil is used. Shaft and axle bearings and differential gears are best lubricated by grease. The tendency is, on the one hand, to make all lubrication as near automatic as possible, and on the other to insist more and more that the purchaser familiarize himself with the lubrication of all parts as well as with their working functions, and both of these tendencies are certainly in the right direction.



LOWER VIEW PIERCE REAR AXLE AND FINAL DRIVE—UPPER VIEW MOTOR GOVERNOR



CHASSIS OF THE TWO-CYLINDER ROYAL

In a word, the steam carriage has left the irregular orbit of assisted brilliancy and unprofitable reaction which marked its early days, and has settled into definite and wisely directed lines of progress. That this fact is appreciated by the public there is ample evidence in rapidly growing business to show; and, altogether, it would be hard to say how the outlook for the year now opening could be more wholesome and encouraging than it is.—  
RAY D. LILLIBRIDGE.

#### HOFFMAN'S ROYAL SUCCESSOR

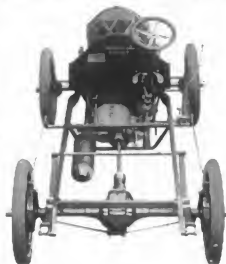
The Royal Motor Car Co., of Cleveland, O., which has succeeded the Hoffman Automobile & Mfg. Co., of that city, will shortly be in a position to make deliveries on two types of cars differing in every detail from the machines built by the old company. The old Hoffman had a single-cylinder motor placed horizontally in the rear, while the new Royal Tourists, as they are called, have two or four cylinders arranged vertically in front under a hood. The motor in the 16-horsepower car has two cylinders and has a maximum speed of 1,300 revolutions and is capable of being throttled down as low as 250 revolutions. The intake valves work automatically and are accessible by removing three nuts and loosening a universal joint on the intake pipe. The governor acts directly upon the throttle and renders the action of the motor exceedingly flexible. An improved cone clutch is used, with a universal connection between it and the transmission, the latter being of the three-speed sliding gear form, in an aluminum crank case, which is dust proof and oil tight. The direct drive is on the high speed, and transmission is by means of the universal joint on the propeller shaft, with bevel gear drive on the rear axle. The rear axles are of very rigid construction and are fitted with roller bearings.

Very large brake drums are attached to the hubs of the rear wheels, the brakes operating by means of a lever at the side, and in setting the brake the clutch is automatically thrown out. A secondary brake is placed on the end of the shaft back of the gear case, and this is operated by one of the foot pedals. As in the case of the main brakes, the clutch is thrown out when the brake is set. It is impossible to change the speed gear without throwing out the clutch, and the entire mechanism for the transmission of power is exceedingly simple and practical.

The front axle has roller bearings, and forward steering gear connection. This is

operated by a substantial steering gear of the wheel type.

The frame is of the pressed steel type, made from polished cold rolled stock, and is mounted on long 2-inch springs, front and



TWO-CYLINDER ROYAL

back. The wheels are 34 inches in diameter and are fitted with 3½-inch detachable tires. The wheel base of the car is 90 inches and the tread standard.

The spark regulator and throttle control are operated from the steering wheel. The spark coils and force feed oiler are located on the dash, the latter not only oiling the motor bearings but the cranks and transmission gears. The radiator is of the cellular type, supplied with a fan attachment, doing away with an auxiliary tank and unnecessary piping. The gasoline tank has a capacity of 15 gallons and is placed under the front seat.

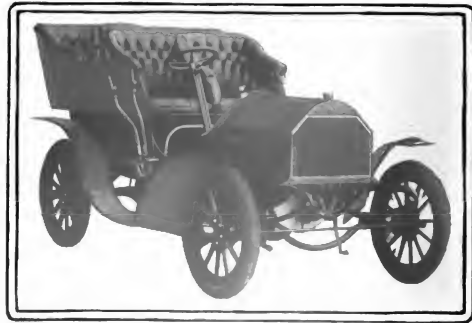
The body is a modified form of the king of the Belgians type and is made of aluminum. It has divided front seats and there is ample space to seat three passengers comfortably in the tonneau. Both front and rear seats have very high backs and are upholstered with the hand buffed or enameled leather. The finish of the car throughout is hand baked enamel with the exception of the wheels, thus giving an elegant hand finish that should stand hard usage. An oval top, with hinged hood, is used which renders the motor exceedingly accessible and gives the car a very good appearance.

The car weighs 1,750 pounds and will list at \$2,300, which will include a full equipment of gas and oil lamps, long tube horn, and set of tools. With a canopy top and set of baskets the price will be \$2,500.

The company will also manufacture a 32-horsepower car, which in the details of construction of the chassis will be an exact duplicate of the two-cylinder car, with the exception that the double-cylinder motors will be placed side by side with an extended aluminum crank case. The other parts of the chassis, including the transmission and axles, will be constructed so that they may be interchangeable for the two or the four-cylinder car. Aluminum castings are used as far as possible in the construction of both cars.

A full king of the Belgians aluminum body will be furnished if desired, and will have a seating capacity of six passengers. The four-cylinder car will weigh less than 2,000 pounds, will have a maximum speed of 50 miles an hour, and will list at \$3,000. The Royal company will exhibit both cars at the New York show.

One western maker now fits small launches with French automobile horns, to take the place of whistles.



THE ROYAL TOURING CAR



The king of Italy has accepted the title of honorary president of the Italian Automobile Club.

A. W. Strong has been appointed the Minneapolis, Minn., agent for the Electric Vehicle Co.'s products.

The Goddard & Allen Co., bicycle manufacturers of Beloit, Mich., will make a carburetor which is the invention of J. H. Saris.

Italian automobilists rejoice at the nomination of Tommaso Tittoni as foreign minister because he is a prominent automobilist.

The annual meeting of the Colorado Automobile Association will be held at Denver, Colo., this week. Officers for the year will be elected and the program for the season will be announced.

The W. C. Jaynes Automobile Co., of Buffalo, N. Y., has commenced work on its new garage, which was described in these columns three weeks ago. It will be 50 feet front, 200 feet deep and 28 feet high.

The first automobile registered in New York was on April 26, 1901, and at the end of that year there were 935 registered. In 1902 the number increased to 2,037 and the first of the present month the number was 5,835.

C. G. Ranier, president of the Vehicle Equipment Co., of New York, has been making a trip through the west, stopping at Chicago over Sunday. Mr. Ranier says his company will have several cars on exhibition at the New York and at the Chicago shows.

The automobile owners of Norwich, N. Y., formed a county association recently and elected C. W. Lanpher president, C. H. Latham vice president, B. W. Stover secretary and H. H. Higley treasurer. The object of the club will be to promote the good roads movement throughout the county.

The automobile is credited with making the roads of England 50 per cent better than they would otherwise be, and the agitation now starting in this country will bear good fruit. The residents of the rural districts view the efforts of the automobilists with more favor since they know by experience what the work of the bicyclists in behalf of good roads did for the country.

J. M. Padgett, president of the automobile club of Topeka, Kan., is organizing an automobile excursion to go to the world's fair at St. Louis next June. The party will be composed of automobilists from Kansas, Nebraska and Colorado. It is proposed to have automobilists who reside in Kansas, west and south of Topeka, assemble the first week in June at the capital, where, with appropriate ceremonies, the start will be made. Most of the members of the Topeka Automobile Club will be among the excursionists, and

with the additions from the other two states mentioned, it is expected to have about 100 cars make the start.

A station of the Broadway Garage has been opened at Washington Heights, 413 West One Hundred and Fiftieth street, New York.

The gate receipts on the closing day of the Paris automobile show amounted to \$5,092, against \$3,400 for the corresponding day in 1902.

Professor Henry Zick lectured on "The German Navy" on Tuesday evening of this week before the members of the Automobile Club of America. The lecture was illustrated with lantern slides.

S. A. Miles, general manager of the National Association of Automobile Manufacturers, who has been in Chicago several days arranging for the Chicago show, returned to New York Tuesday to remain until after the New York show.

Charles E. Miller, of New York, has leased a building at 318 North Broad street, Philadelphia, where he will have a branch of his automobile and bicycle business. Goods will be sold both at retail and wholesale from the new store.

Eduard Canaveau has invented a new motor which, according to the statement given out, will work "without explosion, without the usual ignition and even without noise or shock." The heat for ignition is gained through compression.

At the annual meeting of the stockholders of the H. H. Franklin Manufacturing Co., of Syracuse, the capitalization was increased from \$250,000 to \$300,000 and the following were elected directors: H. H. Franklin, Alexander T. Brown, W. C. Lipe, Henry K. Chadwick, John Wilkinson, A. J. De Mott and Giles H. Stilwell.

A consolidation has been effected by three companies interested in rubber in Mexico. The companies are the Ohio Coffee Growing & Trading Co., of Toledo, O.; the Tres Rios Co., Independence, Ia.; and the Solo-Suehli Co., of Kansas City, Mo. The capital of the combination is \$350,000, and as the properties are adjacent, important economies are expected under the new organization.

The Chelsea Mfg. Co., Ltd., of Chelsea, Mich., was placed in the hands of a temporary receiver January 9. This action was deemed best by the officials of the company, as they have been compelled to suspend active manufacturing during the past 6 months for the want of sufficient capital. The lack of capital has not been occasioned by lack of business, but it is claimed that one person failed to live up to his agreement with the company. The company expects to reorgan-

ize and push business the coming season. A new four-cylinder car, as well as the two-cylinder, which has been made the past year, will be shown at the Chicago show.

The Standard Carriage Lamp Co., of 43 South Canal street, Chicago, has issued a new catalogue of automobile lamps. The company also maintains a department for the repair of all makes of automobile lamps.

The only English automobile manufacturer who took part in the competition arranged by the British war office for military transportation cars has been awarded the prize of \$5,000, and an extra premium of \$900 for the services rendered by the car.

The man who owns an automobile and wants a launch might construct a flat bottom affair upon which he could run the machine and operate the drive wheels against a couple of revolving drums, which in turn could operate side wheels.

Emil Grossman, of 298 Broadway, New York, has issued a new catalogue of the automobile accessories he manufactures, imports or controls. Only the specialties catalogued are carried in stock. These are all fully guaranteed and will be exchanged if found defective.

The Crest Mfg. Co., of Cambridge, Mass., maker of the Crestmobile, has opened salesrooms in both New York and Boston. The Boston branch is at 182 Columbus avenue and is in charge of Ralph Coburn. The New York store is at 154 West Thirty-eighth street and is under the management of C. Perly Walker.

The city council of Antwerp, Belgium, has reduced the taxes on automobiles and motor cycles. The tax for the latter will be \$4 hereafter instead of \$10. Motor cars will be taxed according to their weight—those weighing less than 1,100 pounds, \$10; from 1,100 to 2,200 pounds, \$15; and for cars weighing more than 1,000 kilos, 2,200 pounds, \$20. The former tax on automobiles was \$20.

While the federal law provides that all power boats, gasoline as well as steam, of over 15 tons measurement shall be inspected and licensed, there is nothing to prevent smaller boats taking advantage of whatever benefits there may be in being so inspected and licensed, and many owners of cabin boats avail themselves of this, claiming that they have at least the ever strong arm of the government on their side if nothing else.

The Limousine Co. of America, of Chicago, is now in the hands of the United States court, with Lester W. Childs as receiver. The company started in business last fall, manufacturing a line of coupe tops for automobiles, and the business was getting along nicely when it was interrupted by the illness of the manager, H. L. Call. Mr. Call is now at St. Luke's hospital, New York, and has been there for some time. The business may be continued for a time, at least, by the receiver.

The adjudication of patent suits is a question of vital interest to the inventors of the country, and for this reason the bill recently introduced by Senator Platt to establish a court of patent appeals, and for other purposes, is likely to have the warm support of all who have to do with patent matters. The court, as proposed, is to consist of a chief justice and four associate justices and shall be a court of record, with original and appellate jurisdictions. It will hold a term annually in Washington. It is a well known fact that there is a crying need for a court



R. FULTON GORDON AFTER A SPIN IN THE WHITE HOUSE GROUNDS IN A TOLEDO

of this character and in the interest of the inventors of the country it is to be hoped that congress will speedily enact the necessary legislation to bring it into existence.

At the annual meeting of the Association Generale Automobile, of France, the treasurer announced that the membership had increased from 626 to 2,066 within the last year.

The A. L. Dyke Automobile Supply Co., of St. Louis, Mo., has begun the publication of Dyke's Automobile Bulletin, the object being to show the latest automobile devices and offer suggestions and hints of general interest to customers.

The Rhode Island Automobile Club at its annual banquet at Providence elected Dr. J. A. Chase president, "Fred" C. Fletcher and Darwin Almy vice-presidents, John R. Dennis treasurer and Herbert H. Rice secretary. An automobile track, with machines of every design and hue, adorned the length of the table.

The Bullock-Beresford Mfg. Co., of Cleveland, O., sends out a note of warning in the shape of a card folder, showing the historic early bird that caught the worm, and advises customers to equip their cars early with a Bullock igniter and avoid the delays that may be experienced when the rush season opens.

Official figures show that there were 2,613 automobiles and 2,671 motor cycles in use in Belgium up to December 6 of last year. In 1902, up to the same date, there were 1,991 automobiles and 1,427 motor cycles, while the figures for 1901, at the same date, are respectively 1,332 and 714.

The Manufacturers' Foundry Co., of Waterbury, Conn., recently moved into a new plant, which is thoroughly equipped with modern appliances for the production of high grade castings. The specialty which this company will manufacture will be water jacketed cylinders, and similar work for the automobile trade.

E. E. Smathers, the trotting and running horse enthusiast, will sail from New York on La Touraine, January 28, for a tour around the world in an automobile. He will be accompanied by J. F. Gattuso, a business associate, and probably another friend. E. H. Blakeley will have charge of the 40-horsepower Mercedes which will be delivered to the party

upon reaching Cherbourg. Mr. Smathers expects to return in time for the Brooklyn handicap, June 6, in which his famous running horse McChesney will be a starter.

The Ripper Motor Carriage Co., of Buffalo, N. Y., is putting up a runabout which will be ready for the Buffalo show. The company will have a Main street store and will also handle the Reliance motor cycle.

There are now 1,908 licensed automobilists in Chicago. These, at \$3 per, give the city an income of \$5,724. The new 1904 numbers to be furnished by the city will not be issued until May 1, at which time all licenses must be renewed.

Babette—an inspiration; great big eyes; luxurious hair; dimpled shoulder, and numerous other attractions that make her a worthy successor to the long line of bewitching Goodrich girls, "brought out" once a year for the

edification of customers and friends of the B. F. Goodrich Co., of Akron, O.

The latest addition to the membership of the A. L. A. M. is the Pope Mfg. Co., of Hartford, Conn.

The supreme court of Belgium has rendered a decision that the automobile regulations issued by the mayor of Brussels, fixing the speed limit at 5 kilometers—3 miles 158 yards—were legal. Motorists who contested the mayor's new regulations, and who took the case to court as a last resort, are greatly disappointed, while the manufacturers and dealers will now make an appeal to the king, claiming that the Brussels automobile trade will feel the effects to such an extent that it would hardly warrant them in keeping special stores open, nobody wishing to buy automobiles under these unjust limitations.

A French policeman recently arrested a driver in the Bois de Boulogne for fast driving. When the case came before the court the judge asked the guardian of the law how fast the cars, a Mors, was being driven at the time. "Why, sir; it was going terribly fast, lightning—surely 120 kilometers per hour." The driver here interrupted the proceedings and stated that the car was an old one fitted with an 18-horsepower motor and that it could be easily proven that it could not develop such a speed, 74½ miles an hour, and even with difficulty half of it, to which the court answered: "The Mors goes fast—fine."

For the dinner to be held in New York January 22 the "Mudlarks," which consists of those who survived the recent New York-Pittsburgh endurance run, have appointed a number of committees. The general chairman is August Post, and the other committees will be: Dinner, C. H. Gillett chairman, H. E. Everett, F. H. Fowler and H. C. Esselstyne entertainment, M. L. Downs, chairman, A. F. Comacho, Louis R. Smith, N. Lazarack; institutions and membership, M. C. Reeves, chairman, H. M. Davis, Harry B. Haines, Harry E. Day; publicity, F. E. Spooner, chairman; Arthur N. Jervis, John C. Wetmore, H. W. Perry, R. W. Johnston, Ray D. Lillibridge.



W-100 AGE

DISPLAY OF PRIZES IN THE WINDOW OF THE SEABOARD AIR LINE ON BROADWAY, NEW YORK



# MOTOR AGE

VOL. V. NO. 3.

JANUARY 21, 1904.

\$2.00 Per Year.

## MADISON SQUARE GARDEN AGAIN THE MECCA



# FOURTH ANNUAL NEW YORK SHOW

International in Scope—Brilliant in Character of Displays—Gratifying Demonstration of Industrial Progress

New York, Jan. 17.—The show is on. Greater and grander, more gorgeous and comprehensive, attracting increased crowds and altogether as near to being commensurate in magnitude of display with that of the industry itself as the cramped boundaries of the arena within, balconies above, restaurant without and basement beneath will permit.

The automobile show has outgrown Madison Square garden, vast building that it is and wonderful in size considering its location in the heart of the city's most crowded center. New York has no Palais de l'Industrie, which at the close of the Franco-German war housed the exhibits of the world, for her show; no more than has Chicago now the great Coliseum of the '90s, in which a quarter-mile racing track was once laid with ample room outside for box seats and several galleries for 10,000 spectators.

The growth of the industry made demands on Manhattan's amphitheatre that could not be met. Exhibitors have been crowded into space far incommensurate with their needs and demands—in some instances into but half the area granted them last year. The pressure has forced the display upward. There is a sense of height as one enters the arena and views the encircling promenaders moving aloft in the gallery. But one balcony remains to be added for the sundries and parts people, as it will certainly have to be next year at the present rate of the demand's growth, and then the all around limit will have been reached.

This is the way the problem has been solved this year: The arena is devoted to the heavy vehicles. A so-called "platform" to jolly its tenants into the idea that they are on the floor has been built above the boxes. To this the lighter cars have been consigned. The sundries and parts people have been put in the gallery above the arena seats, the latter, it will be remembered, being above and behind the boxes. The restaurant has been turned into a veritable "salon d'automobile," as the Parisians are wont to dub their show, where most of the importers bide forth. Down in the basement, dignified by the title "exhibition hall," is an overflow aggregation of cars of domestic and European vintage and considerable heavy machinery. Would-be exhibitors at any inconvenience have even seized with gratitude upon the little second tier boxes.

In measuring the magnitude automobile manufacture in this country has attained it must not be forgotten that had applicants been granted all the space asked

they would have filled the Garden twice over and that fully fifty would-be exhibitors, as it is, had to be refused space altogether. Big makers could not show one-quarter of their models and a majority less than half of them. Not a few have been forced to the expedient of changing their exhibit daily to get all their models on view at some time during the week. With all this the makeshift pressing into service of the "platform" over the gallery has been done with convenience to the spectators.

In rough numbers, pretty accurate, though, through there being no room for idle corners, rough because there has been some splitting up of the spaces, there are 185 exhibitors. Ninety show complete vehicles. Fifteen of them are importers, representing twelve European makers, as follows: P. I. A. T. Rochet-Schneider, Mercedes, Clement, Panhard, Mors, Renault, Darracq, Peugeot, Deauville, De Dion and Georges Richard-Brazier.

So much for the exhibits and their housing. The garden itself is the same old garden, of whose size, location

and magnificence New Yorkers are so proud. The great chandelier blazes above, the embowering arches make a great arbor of light of the amphitheatre, and clusters of bunched bulbs flash from the posts. The decorators, however, have insisted on intruding and honor the function with hangings of lemon and white, clusters of flags and festoons of the national colors, pinned at frequent intervals with the emblem of the Automobile Club of America, the original promoter of the show and still a participant in the gate receipts through a three years' contract made at a nascent period of the clubland was deemed



"GOOD BUILDING MAKING IS AN IMPORTANT AS GOOD AUTOMOBILE MAKING"

necessary to a show's success.

In keeping with the decorations above and around were those of the stands themselves—electric signs, high art railings and posts, soft carpets, rich hangings, ornate furniture and pots of flowers, distributed with greater or less elaboration in different instances, but altogether a fitting setting for the most beautiful things of all in the building, the vehicles themselves with their gleaming metal, flashing varnish, well contrasted colors, plate glass limousines and luxurious upholstery. No more of average effect, however, had been made in embellishment of surroundings than in former years. Elaboration of adornment, unlike at the Paris show in the vast Palais de l'Industrie, had to be sacrificed to space restrictions and elbow room for the visitors.

Even to the laity the advance the home industry



had scored during 1903 was impressively manifest. One could walk from the salon d'automobile, where are the best and finest caparisoned cars the factories of Germany and France can turn out and compare elsewhere European automobiles side by side with the American vehicles and not feel ashamed. In the elegance of the bodies, the grace of the lines, the richness of the upholstery, the elaborateness of the fittings and the general impression of power and strength conveyed, there was but a toss-up for the choice between the domestic and the imported product. Americans had learned their lesson well. They strove to copy last year. They have succeeded in this and in some particulars have improved upon their patterns. It is left to the technical critics to pass upon the merits of the machinery, the graceful running gear supports and the handsome bodies enveloped. Prices considered and compared leave the invaders to face a more difficult competition than ever.

It was in the light and middle weight classes, however, that the striking and commendable individualities of American inventors saved the national pride. Our makers are making their main play in the aggregate for this branch of the trade, which has less brass band advertising but is in a large majority in volume. In these classes ingenious Americanisms bristled all over the vehicles and Americanisms whose utility and cleverness were beyond dispute. It was really astonishing to see what our manufacturers had produced in the way of tonneau cars at prices but two or three hundred dollars above those asked for runabouts. The success of the invading Yankee skirmishers in Europe in runabouts seems more than likely to be repeated and to a greater degree in the low-priced tonneaus. There are big high-powered American cars on view too, it must be borne in mind, whose makers boldly and with seeming good reason put prices on them equal to their counterparts in power, size and finish among the imported vehicles.

Over in the salon d'automobile there was, despite all this, the same air of confident assurance in a superiority of product born of longer experience in the art and a satisfied belief that American buyers would continue to pay the difference in price brought about by the duty and founded on manufacture for the wealthy class and a continued demand up to the full output and a little ahead of it. The importers certainly showed a magnificent collection of cars that well deserved the unstinted encomiums showered upon them by experts and laymen. And why not? The best that Europe produces for

the land of easy spending millionaires, whose market it is so strenuously seeking, were to be seen there. The heavy swells of the "400" affected this section of the show. It had also many curious spectators among visitors from distant points, which the full wave of the foreign invasion has not yet reached. The importers had made every effort to secure the best and latest models, many of which were shown in this country for the first time, and there was a natural desire among American makers to examine them as well as the product of their home rivals. In the "salon" were to be seen not a few men prominent in the trade abroad, who in number more and more each succeeding year deem it necessary to visit the American shows.

In the great crowd in attendance, the magnificence of the entire display and the hurrah of the show itself optimism forgot conservatism and was fairly rampant. It was no place for men to weigh prospects soberly, and boom talk predominated. It was not to be wondered at

in the face of the great improvement in the middle and top price American cars and of the wonders those that sought to give much for the money had accomplished. "How can they help buying that car at the price?" was frequently heard and was the keynote of the boom chorus. All seemed to forget in the enthusiasm the great show brought, to fear the danger of increasing foreign competition at lower prices, the effect of a possible intimation of bad Wall Street conditions and the perils of a too sanguine overproduction that had been croaked over in factory offices and garages during the past three months of

the normal and to be expected dull season. This is not to be altogether lamented even by the conservative; for it fills makers and salesmen with energy and spreads infection to the public that is to do the buying. The public will surely get far better machines and a much better purchase for their money this year than last. This in itself would seem to justify point to a boom not altogether of show making.

Indications point to a record breaking attendance for a New York automobile show. The daily newspapers have given the exhibition such a booming as no garden function, except perhaps on the whole the horse show, has ever had. Yesterday and today they have devoted pages where last year they gave column to it. Pictures galore embellish the columns of several of the dailies. The Mail and Express devoted four pages to an illustrated supplement showing the 1904 models and five pages besides to the story and the motor car adver-



"THERE IS NO EAST AND THERE IS NO WEST AT A SHOW."

tising. Among the other recognized special supporters of the automobile the Herald and the Commercial-Advertiser covered the show this morning and yesterday more than fully and with elaborate pictorial accompaniment, and the American took up the affair with characteristic burrah and gave it three pages of illustrations and account, including the liberal advertising evidences of appreciation manifested by the makers, importers and dealers. In all this there is a lesson to the daily press of other cities in their treatment of the automobile. It pays. It will pay more. The enormous value of advertising the show thus received ensures unparalleled success.

The hotels are filled with show visitors. The early rush has been, of course, by the tradesmen, who have fallen in swarms upon the Cadillac, Navarre, Victoria and other Broadway caravansaries where the members of the industry most do congregate. All, however, report a marked rush of applications for rooms during the week. The latter come from the hundreds—no one knows how

many—who take this chance to do their automobile shopping here and now or seek the opportunity the shows gives for the examination of all makes and the selection of purchases to be made from local agents on their return home.

As an educational affair the show is by long odds the most distinctive of all American automobile exhibits. It bravely asserts a progress in motor car construction which brings almost at hand the speculated time when American automobiles shall not only be better than European automobiles at the same price, but shall be undeniably the peerless cars of the world. At previous shows there has always been more or less of a sub-dued awe embroidering the exhibits of French cars. An atmosphere of aristocracy hung around them. This year, however, in the salon d'automobile a representative display of Europe's leaders is made. The machines are fine—in design, in construction, in finish, in appearance. They are away and above the French cars shown as curiosities, almost, in the Automobile Club of America's loan exhibit at the first show 3 years ago last November. The French trade has progressed rapidly. But in the other parts of Madison Square Garden are domestic cars fine in every particular—representatives in truth of the world's best class of automobiles. Automobile making is dividing into classes. The division by nations is ceasing to determine grade. "Wonderful," says the man who stands in the midst of the foreign car display at this show and compares the cars he sees with those he saw strewn about in the restaurant at that first show. "More wonderful," he says as later he sees

American cars in all the glory of modern design bearing the names he had seen on mere experiments at that same first show.

France has run a swift race. America has run a swifter one. Starting much behind we have drawn on; have caught on. The nations that were spread around the track of international competition have bunched. The last turn is soon to be reached—and then the sprint. The show viewed collectively and its cars separately and closely undoubtedly places America well in the running.

There is an elegance about the whole exhibition and an elegance about the cars shown which is convincing of the degree to which the American manufacturers have brought the products of their industry. We have in the past, when comparing American cars with other cars urged the fact that American cars are built for American roads and the awful abuses of cars necessitated by the use of these roads. Last fall twenty-five American cars ran

through a flood-swept country, sweeping on and on, past stalled trains and interrupted travel of all kinds. They proved that American cars could go anywhere, do anything that is ever required of an automobile. The garden show goes further in the demonstration. Here are the same stout, reliable, hardy cars that have made such records of success in hard road work; and here they are with the body and equipment splendor of the French greyhound created primarily for skipping over level boulevards. We have built to go and now we are building to furnish the acme of comfort and style. In a measure the industry



DURTEE BESTOWS UPON THOMAS THE "SIGN OF THE THREE."

as depicted duplicates that of France—its keynote is neither the racing nor the extremely light small car but the moderate power car for all uses, capable of good speed in touring.

From basement to the topmost balcony of the garden the whole show is the best testimonial that could be rendered of the development of the industry—it speaks through the goods displayed and the eye needs no interpreter to catch the lesson.

Spectacular, brilliant, crowded with motor car beauty—a picture in itself—the show is yet full of commercial and mechanical interest. It is not one sided; not a show for any certain class. It is broad as the requirements of motor car buyers; deep as the critic wishes to delve in workshop method and result. It has value for buyer, curiosity seeker, tradesman, mechanic, more so than had the recent Paris show, for it shows a greater progress in a twelvemonth than did that show. It is typical, national, superb.

The car is much changed in appearance since Oldfield drove it its last evening for the show's opening, but it cleared away during the dinner hour and left it not so bad night of it after all. There had been the usual final rush of preparation and there was still a hustling in of exhibits and furniture when the sweepers essayed to begin sweeping around 6 o'clock. A crowd of fully a thousand was at the gates at half past seven o'clock. Some finishing touches were still being given the clean up and it was 8 o'clock, the announced hour of opening, before the doors were unlocked. The crowd swarmed in and soon filled the aisles and quickly fringed the booths. An hour later the garden was actually crowded. At the turns, stairways and congested points locomotion was difficult. Still the crowd grew and the police took a hand in directing its movement at the entrance and the stairways so that there should be no blockades. It was evident that a record breaking American automobile show crowd was in attendance.

At the opening hour the lights were turned on full. They jumped in a blaze from the niches and crawled quickly along the letters of the electric signs. The latter are far more general than before, and blazing above the platform booths and still higher up in the gallery, where they have never been before, gave a greater brilliancy than at previous shows.

The Pierce, Haynes-Apperson, Winton and Stearns stands formed a phalanx facing the entrance. The big booths of the Pope Motor Car Co. and the Electric Vehicle Co. flanked the main aisle in the center, with Autocar, White, Baker and Locomobile as their neighbors. Thomas and Cadillac stretched across the eastern end. The Vehicle Equipment Co. had the largest space of all for the display of its trucks.

There were really few attempts at elaborate decoration that went beyond the conventional or were worthy of special mention. The Pope company had again erected the elaborate outfit of electric lighted iron posts and signs, which were first used by it at Chicago. Up on the platform, though, the air-cooled Franklins had built a gem of a drawing room in white, with an arched alcove and walls frescoed in flowers and tracery. The booth stood out by contrast with the somber hangings of its neighbors like a white temple in a thick grove. Along the platform several exhibitors made use of the steps and ample space behind for the convenient and not unattractive office or tete-a-tete recesses.

Among the importers in the salon d'automobile there were several elaborate schemes of decoration more on the line of the Paris show exhibits. The Consolidated Motor Co., the new maker of the Moyra, a Franco-American concern, in its reproduction of the Roebert-Schneider, had a background of architectural work, frescoed in flowers. The Deauville people were conspicuous by Turkish cozy corners. The hangings and fittings of the Central Automobile Co. were also oriental.

Charley, the Mercedes outlaw, and Panhard & Levasaur, the embargoed invader, held their ground boldly in the very fort of their enemies. Charley had only his cars and himself to show, but Panhard & Levasaur put up a high art designed and bejeweled booth and had a party of fine wax ladies and gentlemen, attired in the very latest winter touring garb, in one of its cars.

How prominent the racing end of the game has become as a factor in advertising and the public's estimate of merit was seen by the conspicuous places those makers whose cars had won speed fame gave to the machines and the crowds that gathered around them.

With Barney Oldfield and Tom Cooper on hand and Bullet 11, holder of all the world's track records, displayed by way of a text, the Winton stand was a Mecca for the racing fanciers. There the talk was race, race, race, record, record, record all the time. Barney and Tom were confident and defiant and ready to make any old matches with anybody and the new record makers in particular.

While there was less of racing talk at the stands of other record seeking firms there were the same curious crowds clustered around the mute speed heroes. The Stevens-Duryen light skeleton, which came within a fifth of a second of beating Vanderbilt's great Mors up Eagle Rock hill and later scored 57½ seconds for the mile at Ormond, a new world's record for its class, drew crowds. That the Packard Gray Wolf had covered a straightaway mile in 46½ seconds at Ormond, also a world's record in its class, was not forgotten. A bulletin prominently displayed the figures and the fact that in thirteen trials it had each time beaten the American straightaway figures.

Down in the recesses of the basement the Morton Aetna man found Henry Ford and "999," Barney Oldfield's first love and the pioneer of the great American record breakers. His new crown of the world's straightaway mile in 39½ on the ice at Lake St. Clair, made it the undisputed king of the royal speedsters at the exhibition.



The car is much changed in appearance since Oldfield drove it its record mile on the Empire City track. A long pointed water tank, resembling a torpede, tops the cylinders longitudinally. In front there is a big gasoline tank, pointed also to cut the wind. A wooden wind shield sloping toward the rear now protects the crouching driver at the wheel.

"We have to lessen wind resistance in every way possible," said Mr. Ford, as he gazed proudly at his space annihilator. "You know it takes 5 horsepower to drive a 2-foot square surface through the atmosphere at 60 miles an hour."

Mr. Ford pointed out the change in the gearing and stated that considering that 448 revolutions were equal to a mile a minute, it took double that number to secure 2 miles a minute, to which "999" very nearly approached that memorable day of its flight across the ice. Other changes, said he, have been the putting in of the Ford sparking device and the same carburetor used on the Ford commercial machines. He demonstrated how his daredevil mechanic lay alongside the cylinders on a board fastened to the frame and kept the throttle open and said that it required twenty trials or more of practice before a full speed mile was possible.

"Are you going to Florida with '999,' Mr. Ford?" was asked point blank.

"I think I shall," was the reply significantly given.

The Ford machine is not among the entries announced today. Record trials only are probably the ambition of the Ford fighter or perhaps only a try in case the beach flyers cut his ice figures.

A walk down the aisles discloses new things and novelties at every stand, tempting one to stop for a longer look than a mere casual glance. It would take many hours of inspection to catalogue all worthy of notice.

The Knox people have an aluminum finished chassis in operation, driven by an electric motor, showing the actual working of every part and rendering demonstration effective.

A glibel giant's hand hung from above points to the Haynes-Apperson three speed driving gear. Here may be seen one of the handsomest cars in the show—a royal purple body striped in white, with canopy top supported by brass uprights and fitted with an ornate brass luggage railing. One saw an impressive Quaker gray canopy top Columbia gasoline limousine at the Electric Vehicle stand and as diversified a display of electric town carriages as limited space permitted.

A striking limousine and a white touring car were noticeable at the White stand. The Locomobile people showed a brave array of gasoline vehicles—a touring car in gray with maroon upholstery and a handsome limousine.

The new 6-horsepower touring runabout with machinery beneath a hood in front was the surprise the Olds people had to spring. The new railroad inspection car rigged to run on the rails was also the object of much curious attention. At the Rambler stand attention was divided between the big 16-horsepower tonneau at \$1,350, which laid claims to being the most for the money offered at the show, and the delivery wagon convertible into a pleasure runabout or tonneau. There was naturally a crowd always at the Thomas stand listening to the gospel of the three-cylinder.

Raring interests naturally predominated at the Packard stand, where the Gray Wolf was starred as the feature. There was, as a matter of course, a strong desire to see what Col. Pope had turned out in his new products—the Hagerstown runabout and the Hartford tonneau.

So much for the result of the hottest of hasty pushing through the big first night crowd for a mere peek at some of the stands.

The salon d'automobiles was so crowded with cars and packed with people in the limited space left for visitors that moving about was difficult and a close inspection of what the importers had to show still more so.

Toward the middle of the evening a sensation was created by the arrival at the Smith & Mabley booth of what A. D. Proctor Smith claimed to be the first French car to be built in America. It was made at the firm's factory in this city and has been baptized the Smith & Mabley Simplex. It has a racing body finished entirely in burnished aluminum with brass trimmings. The engine is the same as that which drove the Vingt-et-Un motor boat so marvelously fast on the Hudson.

The Deauville people showed a gorgeous tonneau. A beautifully furnished chassis attracted the most attention at the Darracq stand. Mr. La Roche was expecting tomorrow a park phantom with footman's seat in the rear. The crowd in the importers' section





rendered it impossible to get near enough to the vehicles even to catalogue them, much less to point out the few features possible on a first night's rush through the show.

The limousines and the side entrance vehicles were, of course, the most interesting vehicles to be seen here. Side entrance was effected in some direct. In those cases the tonneaus were very roomy. In others the front seats swung on pivots and allowed ingress from beside the driver. A very roomy phantom in addition to the seats placed against a solid back had small folding seats on each side door. There were also folding seats within some of the limousines. In one limousine coupé front entrance was gained by a sliding door. The space available for the importers is utterly inadequate and most of them will make daily changes of their exhibits.

Other importers had been crowded down into the basement. Notable among these were Alexander Fischer and the P. I. A. T. people. The former had a Roebert-Schneider chassis on view in the midst of rathskeller mural and pictorial surroundings. Mr. Fischer is to have this season a car built in France especially for him, yet unexported, though the *MOTOR AGE* man tried to force "Lafayette" on him as an appropriate name for a Frenchman who was to seek fame in America.

There are all sorts of interesting novelties in the sundry and fitting line to be seen in the gallery. It would have taken too long a time to burrow into the little nests on a first night to dig out anything in detail. Entire concerns are groused about the "royal box" at the entrance and along the platform at that end of the garden. Red electric lights mark the bidding place of Grossman and the enoutchoue tubs at the rear end of the building, and Norris Mason has a brave display of Michellins down in the basement.

Some of the balcony cyries are made ingeniously conspicuous. The Federal Mfg. Co. has made a pagoda of its. Dick Wells, of the Badger Brass, and Governor Castle, of the 20th Century, let their lights shine

before men with their usual brilliancy, and this refers both to the visitors and to their lamps. The Rushmore searchlight is focused on a ground glass mirror and the power of the light is thus clearly demonstrated by burning paper, pencil heads and such in the focused beams. Dietz is conspicuous, too, among the path finders. Of course Charley Spiltdorf's "spark" makes its usual long jump.

This morning's papers are loud in their praise of the show. The Sun, with its characteristic speak-right-out Americanism, with no qualifications or apologies, happily hits the nail on the head when its automobile writer, a critic of standing, says:

"Having started from 'scratch' about five years ago, following the mechanics in other nations of the world handicaps of from 1 to 4 years' prior start, the automobile industry of the United States has quite caught up. It has closed all intervening gaps and is now running with the 'leading bunch' on terms of even competition in the race for commercial supremacy. The fourth annual automobile show that opened in Madison Square garden last night leaves no doubt about this. The great exhibition building is almost packed with big and little motor vehicles that equal in up to date appearance, general style and finish, the best of the foreign made cars, and that the American machines are the equal in efficiency has been amply demonstrated. This fact of the American manufacturer having caught up with the leaders in the industry abroad is the most prominent, important and interesting one revealed by the fourth annual show. The American manufacturers are no longer at school in the college of the European industry—1903 was their senior year. The present show is their commencement exercise. They have learned the foreign methods and the ideas that inspire them. They are employing them to a considerable extent, but there are abundant signs that the American industry has entered upon an independent career, which will no longer be hampered by servile imitation."



## A FRENCHMAN'S IMPRESSION OF THE SHOW

Having been asked by the editor to give my opinion on the present show from a Frenchman's point of view, I endeavored in the short time allowed me, to get a general idea of the whole show, and after landing there Saturday afternoon among the workmen and the caretakers busy fixing the stands for 8 o'clock, I made a few observations that may interest the readers of *MOTOR AGE*.

I must admit that to one who is not well acquainted with the American makers the difference between the practice in automobile designs on both sides of the ocean would be simply amazing. If I only consider the typical American machines, the light and comparatively low priced runabout, for instance, of which the Oldsmobile can be considered as a typical model, I find that there is not a single feature common to this car and the French cars of the same price and power.

The almost universal use of the horizontal motor, even on high power cars, is most surprising to the French visitor, when it is considered that most European makers, except two or three extra-conservative concerns, have entirely rejected this type of motor, except for industrial vehicles of heavy duty.

Not less surprising to me than the great number of horizontal motors is the number of planetary change speed gears to be found on the cars up to 20 horsepower. This is also a feature practically unknown on the French market. The last Paris show did not have more than three of these gears shown on European machines, all of which were very poorly designed, and fitted on cars made by minor concerns of practically no importance.

It is my own belief that the planetary gears, although more appealing to the mind of technicians and inventors, will be, sooner or later, replaced by the sliding gear, unless a new planetary device, simpler and lighter, is found. I consider that a sliding gear, light and compact, such as the one used on the Covert runabout, which I was able to examine carefully, is much to be preferred to any kind of planetary gear. I was pleased to see that the sliding gear has already made a good many friends among the manufacturers and that it is to be found even on some of the lighter runabouts, which it certainly did make look simpler and neater.

The spur gear differential is used here to a much greater extent than abroad, and I consider this one of the points in which America will teach a lesson to Europe, together with the use of the tubular

By RENE M. PETARD



wheel, which is not manufactured to any great extent abroad. The French seem to be satisfied with the wooden artillery wheel, a standard equipment of their cars, and only endeavor to increase its strength and lightness without looking in any other direction.

I was pleased with the tubular wheels shown either on cars or at the stands of the makers, and I believe that there will soon be a wide export market open to their manufacturers.

I think also that some of the American ball and roller bearings should find a ready sale abroad.

The lever steering seems to lose in favor and this is certainly not to be deplored. The French makers are against such a steering device, and they are far from being wrong. It is evident that after a long ride on a rough road the hand and wrist of a driver will be much more tired and sore than with wheel steering. A good proof of this fact, and also of the fact that the demand for wheel steering is increasing, is the adoption of a wheel on the new Oldsmobile runabout.

Outside of the runabouts, and in some instances in the runabout class itself, European influence is plainly shown. As a rule the French and German conceptions have been cleverly applied and sometimes improved upon. The imitation is far from being as close as last year, and is a majority of cases the European ideas seem to have been simplified and, as far as ease of manufacture is concerned, improved in such a way that American manufacturers can boast of an originality which was not to be found last year. However, in most cases the parts do not show the same refinement and ingenuity in the design of details that is to be found in the European products.

Another total departure from European practice besides the ones above named, is the use of air-cooled motors on cars of considerable weight and power. The Americans seem to appreciate the advantages of these engines as far as simplicity is concerned, and after the success of air-cooled machines in the endurance runs, as well as in everyday use, I believe that this type has come to stay. However, I believe that it would be a mistake to increase too much the power of the engine and that a favorable location of the cylinders will be difficult to find without impairing the good looks of the car.

As a whole I consider the present show as a great success and an immense improvement on last year's. The manufacturers show better products, cheaper and better looking cars, and I believe that the day is close when Europe will fear American competition to an extent yet unknown and entirely unexpected by her.



# THE TREND OF AMERICAN CONSTRUCTION

It is freely expressed by the Americans at the New York show in Madison Square garden this week, that this is the last year of popularity of foreign cars in this country, the consensus of home opinion being that in many particulars cars made on this side of the Atlantic are fully equal to, and in some cases excel, the productions of abroad. The home trade is jubilant. It points to its own exhibit and declares that the comparison between it and the foreign display is not subject to any apology, explanation or excuse.

The importers and direct representatives of the foreign cars, on the other hand, point with justifiable pride to the interest taken in their wares and show numerous orders tending to disprove the theory that the public is losing its idea of the supremacy of European machines.

Whatever the truth of the situation may be, it is evident to all that there has been a decided advance in the production of American cars and that probably this advance is greater than the corresponding improvement in the foreign cars of this year over those of last. The improvement in all the cars, foreign and domestic, is most noticeable in their style, finish and equipment; but upon investigation it is found that it extends much further, including the general design and construction, the necessity of working parts, the strength of supporting members of the machine, the selection of materials, the workmanship, the finish of mechanically operated parts and the handling of the minute details. American cars have especially advanced in the last particular and there is a noticeable lack of unfinished or crudely finished parts which have sometimes in the past characterized moderate priced and even comparatively high priced American machines. The fitting of a cotter pin has become the work of care; the determining of bolt lengths has been brought to an accurate mathematical basis, and file marks or the rough burr where a rack saw has cut off an unwanted quarter of an inch of bolt or screw, are not in evidence.

In the general selection of models the trade has run toward larger cars, and in the number of different machines produced the small cars are far in the minority at the show. The runabouts are heavier, the light tonneaus cars are heavier and the touring cars are heavier. It is impossible to tell whether this is one step in a continued process of development, or whether it be the first step of a high power pad, such as characterized the French industry a year ago, only to find itself beaten by the public demand for rigs more convenient and of more general utility than the high powered racers equipped with a few touring makeshifts.

Strength and durability have always characterized American productions and it is not to be wondered at that the American makers are endeavoring to put enough material into all cars of all models to render them capable of the most severe service under any possible conditions. It may be, then, that the tendency at this show toward larger cars means that the trade has reached a limit of substantiality and power and that succeeding years may not each double the increase in size which has characterized each Madison Square show.

In the matter of preferences in the selection of necessary devices, it is noticeable that while the jump spark system of ignition naturally predominates, the make and break system has gained new advocates, especially in the case of foreign cars. One prominent manufacturer, in fact, gave it as his opinion that within a very few years the jump spark would be in the minority. At any rate several American makers who have previously used only the jump spark, now offer either system optionally to the customer, while others fit both to the machine.

In the construction of motors the mechanically operated inlet valve is much more in evidence than a year ago, but still the majority of the motors have the atmospherically operated inlet valve. In valves, also, there are more finisht ones than formerly. Valve openings are larger and more attention has been paid to such small points in construction as the adoption of means to prevent valve stem spring fastenings from

becoming loose. One of the most ingenious arrangements toward this end is the obviation of the cotter pin by turning the valve spring end crosswise, so that it may extend through the hole usually fitted with the pin. The cotter pin or slot and key construction is almost unanimous, however.

Such conveniences as commutators in plain sight of the operator, motor governors, magnetos used in connection with storage batteries and force feed lubrication are becoming more common, especially on the larger cars.

In all but the light class the sliding gear predominates the transmission situation. This is used principally in connection with single or double chain drive, but there is a noticeable increase in propeller shaft and bevel gear transmission since a year ago. It is surprising that in the sliding gear systems less than one-half of the makers have provided interlocking devices between the clutch and gear shifter.

Pressed steel frames are common, but one of the most popular frames is the built up frame made of plate steel and angle irons. The straight angle iron frame is, of course, predominant among smaller makers. Most of the foreign cars and a few of the American cars are equipped with pans underneath the motor and transmission cases.

The hexagon top, the square top and the oval top bonnet are almost universal. It is a great tribute, indeed, to the Mercedes car—this way in which American designers have racked their brains and strained their ingenuity in the endeavor to create Mercedes style bonnets which will be as pretty and as stylish as the Mercedes and yet different from it. An interesting photograph would be a front view of all the different square bonnets at the show. In connection with most of these bonnets some form of cellular or so-called honeycomb radiator is used, and this, of course, means almost without exception a direct drive fan behind it to form a forced draft.

In bodies the American builders have become more ambitious and more daring. All of the bodies are more roomy, more comfortable and more luxuriously upholstered, this tendency applying to small as well as to large cars. Canopy tops are common to almost the whole trade, while the limousine appears on machines whose makers previously built nothing more pretentious than the ordinary light tonneau. Front and side doors to tonneaus spot the exhibition and double tonneaus are not wanting. It is evident that the carriage making art is being worked to the limit to create bodies which will make vehicles more luxurious, more useful and more desirable in every way than horse drawn carriages of any kind have ever been. Comfort in rough road work has evidently become one of the primary qualities of automobile design and construction. Wheel bases are longer; 6 feet now being short even for a pretentious runabout. Wheels are larger, tires are larger, springs are longer, wider and of more leaves. Bumpers are more in evidence and extremely great overhang on tonneaus is disappearing.

Returning to the first consideration, that of the relative values of American and foreign cars, it is unquestionably true that—whether or not next year sees the rapid decline in the importation of cars that marked the sunset of the bicycle importing business when the American cycle manufacturers reached a stage of development from which they could quickly spring into the lead—it will not be many seasons ere the salon d' automobile at the New York show, if there be one, will not be the standard of value by which the rest of the exhibition is compared, either favorably or unfavorably—the French car will not be the yard stick of automobile of excellence.

The show is a wonderful one and the automobiles shown are wonderful when one stops to think of the character of the cars of the show of 3 years ago. They are wonderful in reality; more wonderful in their relative yearly values. The shows each year are cyclometers of progress.

## THE SHOW AT A GLANCE

Machines displayed .....	258
Gasoline cars .....	185
Electric cars .....	45
Steam cars .....	9
Large Electric Trucks .....	7
Large Gasoline Delivery Wagons ..	5
Motor Bicycles .....	7

### IN THE GASOLINE CARS THERE WERE

Chassis .....	33
Open Tonneaus .....	66
Tonneaus with Tops .....	35
Runabouts and Miscellaneous .....	35
Limousines .....	11
Surreys .....	5

### THE MOTORS WERE

Water-cooled .....	156
Air-cooled .....	29
Four-cycle .....	181
Two-cycle .....	3
Compound .....	1
Four-cylinder Vertical .....	82
Double Opposed Cylinder .....	41
Single-cylinder Horizontal .....	25
Double-cylinder Vertical .....	17
Single-cylinder Vertical .....	14
Triple-cylinder Vertical .....	5
Triple-cylinder Oblique .....	1
Jump Spark Ignition .....	158
Make and Break .....	21
Both .....	6

VIEW OF MAIN HALL OF MADISON SQUARE



FOURTH ANNUAL NEW YORK AUTOMOBILE SHOW



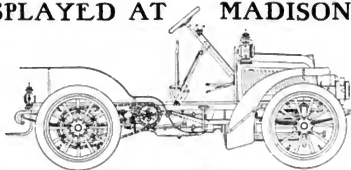
GARDEN, LOOKING TOWARD FOURTH AVENUE



UNDER THE AUSPICES OF A. C. A. AND N. A. A. M.



# CARS DISPLAYED AT MADISON SQUARE



BERG 16-HORSEPOWER CHASSIS



**BERG AUTOMOBILE CO.**—The Berg company shows the chassis of two and four-cylinder cars. In each model the transmission is through sliding gears, propeller shaft and bevel gear final drive. The motor is not greatly novel, but seems to be carefully built and with close discrimination in the arrangement and proportion of parts. All valves are mechanically operated and interchangeable, the exhaust valves being on one side and the inlet on the other side of the cylinders. The cone driving clutch is backed by a spring to prevent sudden gripping. The entire running gear construction is substantial, the wheel base is long, the springs long and wide and the axles heavy. The braking system includes expanding hub brakes. The two models are rated at 18 and 24-horsepower, respectively.

**DEBBEON MOTOR CAR CO.**—Two large machines are located in the first tier of the balcony, and proof that they run is shown by the wear displayed in testing the machines. Both cars have bodies of the king of the Belgians type. In the style E the motor is of the four-cylinder vertical type, and is rated at from 30 to 36-horsepower at 1,000 revolutions. The gear is of the sliding type, giving four speeds forward and one back. The radiator is of the honeycomb type but laid in the form of shelves, and this with the tank permits a 12-gallon water capacity. The car is fitted with brakes on the differential and also on the wheels, and when the brake is set the clutch is automatically released. The ignition device is of a simple sort of make and break, with magnets for the current. The wheel base is 90 inches, the wheels 32 inches and the tires 4½ inches. The model D is also a four-cylinder car rated at from 12 to 15-horsepower. There are three speeds forward and jump spark is used, and other than being smaller all around is about the counterpart of the model E.

**THE AUTOMOTOR CO.**—Exhibit consists of one four-cylinder touring car. The engine is made with the exhaust valves set to one side and the inlet valves opposite. All valves are mechanically operated. The transmission gear is of the planetary type, provides three speeds forward and one reverse and connects with the rear axle bevel gear drive, two universal couplings being used in the shaft. The radiator is of the Mercedes type fitted in front of a large square hood. Front seats are divided. The car is fitted with a large folding top, the front of which is strapped to the dash.

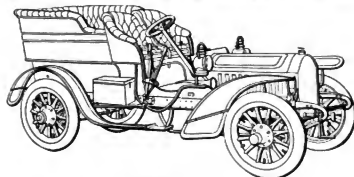
**PEERLESS MOTOR CAR CO.**—Two four-cylinder cars are shown, one of 24 and the other of 35 horsepower. The smaller car has three speeds forward and reverse and the larger four forward speeds. In most other particulars the cars are the same, with the exception of dimensions, etc. The frame is of pressed steel and the wheel base is extremely long, being, in the 35-horsepower car, 102 inches. The wheels are 34 inches in diameter. The motor inlet valves are mechanically operated from the same cam shaft that operates the exhaust valves. This shaft also drives the ignition device and the force feed lubricator. In addition to the regular jump spark ignition system, the motor is fitted with a make and break system which may be used interchangeably with the other. The clutch is a little different from that used

last year, being of the internal conical type; the same system of sliding gear transmission is also used. All of the speed changes are made with a single lever. There are no idle gears in use on the direct drive and there are interlocking devices to prevent the locking of the clutch when gears are not properly in mesh. The final drive is through a propeller shaft with universal joints and bevel gears, to a live rear axle running in a peculiarly arched stationary shaft.

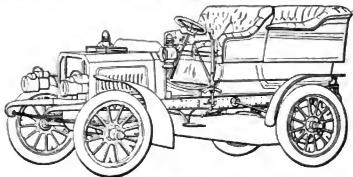
**ROYAL MOTOR CAR CO.**—The two-cylinder, 16-horsepower Royal is a decided departure from the Hoffman car of last year, the reorganization of the old Hoffman company having been coincident with the redesigning of the product from stem to stern. The new car has a pressed steel frame mounted on 2-inch semi-elliptical springs, 42 inches long in the rear and 36 inches long in front. The wheel base is 90 inches and the wheels 30 inches in diameter. The motor is a typical double-cylinder upright with mechanically operated inlet valves, jump spark ignition with two sets of batteries and both governor and head control. The clutch is of the self-contained cone variety with a universal joint between it and the transmission gear case. It is pedal operated. The transmission gear is of the sliding variety, furnishing three speeds forward and reverse and with a final drive through a propeller shaft and bevel gears. There is a brake on the transmission shaft and also the usual wheel brakes. The application of either disengages the clutch. The speed changing device interlocks with the clutch so that it is impossible to make a change of gears without disengaging the clutch. The radiator is of the heavy brake variety and the bonnet is one of the popular adaptations of the Mercedes style. The body is of aluminum and is a modified king of the Belgians in design.

**F. B. STEARNS CO.**—There are no great changes in the Stearns car over the previous patterns. It has the same general construction of wood armored frame, double opposed cylinder motor under the body, sliding gear transmission and single chain drive. The body also is much like that of last year, with perhaps a more roomy tonneau, and deeper upholstery. One of the principal novelties in its construction is a water pressure oil feed working in conjunction with and dependent upon the water circulation. A new carburetor is also used, this being constructed with the throttle and the air regulating valve connected to be actuated simultaneously by the same lever, so that when the throttle is opened or closed a corresponding change in the proportion of air and gasoline in the mixture will result. The intake and exhaust valves are much larger than before, but have less lift, the springs being heavier.

**BAKER MOTOR VEHICLE CO.**—Light drawbar pull has ever been the war cry of the Baker company, and all of its numerous light and medium weight electric cars evidence this principle of construction. The single seat cars are improved patterns of last year's line and are characterized by the same tubular running gear construction, wire wheels, ball bearings, motor suspended centrally under the frame, and single chain drive. The newest model of the line shown is the surrery, which was described recently in MOTOR AGE. This is somewhat on the lines of a gasoline car



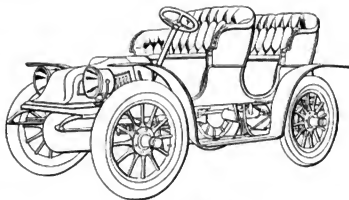
THE FOUR CYLINDER PEERLESS



THE STEARNS

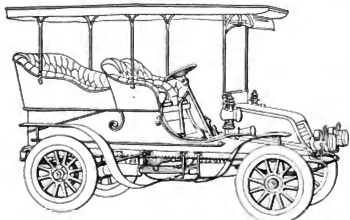
with an imitation motor bonnet in front. It has wood wheels, but in motor, drive and axle particulars is of the same character as the smaller Bakers.

**WINTON MOTOR CARRIAGE CO.**—The Winton in exterior appearance is much the same Winton as last year, the notable difference being the canopy top and swinging glass front which is now a part of the regular equipment. In its construction are several changes, which are not radical, but rather the result of some little study and experiment. The tonneau is wider and deeper and is fitted with a door seat. The wheels are 34 inches in diameter and fitted with 4½-inch tires. The increased diameter of the wheels is supplemented by higher sprocket gearing to give increased speed. The rear springs are 8 inches longer than formerly and of more leaves. The front springs are also longer. The rear springs are equipped with rubber bumpers. The transmission gear has been changed, by using cone clutches instead of the flat surface friction clutches previously employed. The male members are made of case hardened and ground steel and the female members of phosphor bronze. This clutch, running in oil, is said to be almost unresponsive to the ordinary tendencies toward wear. The lubricating system has been entirely changed. The new system comprises the pump forced circulation of 2 quarts of lubricating oil which is used over and over again. About every 500 miles the oil is drained off and a fresh supply put into the reservoir. It is said that the system is entirely automatic. There are also several other minor changes throughout the car. An



BAKER ELECTRIC SURREY

roller bearings in the rear. The semi-elliptical springs are extremely long. The motor is of 4½-inch bore and 5-inch stroke. All valves are mechanically operated and interchangeable. The cooling system includes a disk radiator and a circulation indicator on the dashboard at all times. The clutch is of the Panhard cone pattern, operated by a pedal. The transmission gear is of the sliding gear style enclosed in an iron case and with a direct drive for the high speed. The final

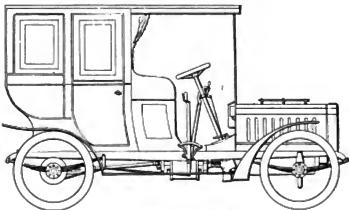


THE WINTON

interesting feature of the exhibit is a motor run by electric power showing the operation of the lubrication, ignition and water circulation systems. Outlet cups are arranged at the bearings so that the spectator may see the movement of the oil, while an outlet and funnel attached to the radiating apparatus shows the passage of the water. The contact breaker box is exposed, as are also the cylinder heads, to show the action of the ignition system.

**ALDEN SAMPRSON MFG. CO.**—The frame of the four-cylinder touring car shown is of wood, armored with steel plates. The motor and transmission are on an angle steel sub-frame suspended by two semi-circular girders. The wheel base is 88 inches, the tread 50 inches and the wheel diameter 32 inches. The springs front and rear are 34 and 36 inches respectively. The axles are solid and the steering knuckles are of the Lemnole pattern. The motor is of 4-inch bore and 5½-inch stroke, said to develop 18 brake horsepower at 810 revolutions. The cylinders are cast in pairs. The inlet valves are atmospherically operated and are directly over the exhaust valves. A centrifugal governor acts upon the throttle. The regular ignition is by jump spark of two optional kinds, one with four and the other with one coil. In either, a dynamo and storage battery is used. Choice of force or gravity feed lubrication is offered. The motor governor may be cut out of service by pressure upon a pedal. The Baladac system of sliding gears, furnishing four forward speeds and a reverse drive is used. The final transmission is by double side chains.

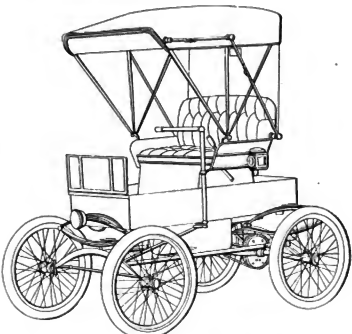
**HOWARD AUTOMOBILE CO.**—Most interesting of the Howard models is a four-cylinder car called the "tonneau-de-luxe." This has a double tonneau, so that altogether there are six individual seats and a folding rear door seat. Equal to it in character and price is a combination car of the limousine order with removable top and windows. When the coupe part is detached the front section of the roof may be left so that with both the front and back glasses in position and the side curtains dropped, the operator is entirely enclosed. The back glass of the front seat is removable and may be dropped into a pocket. The car is built upon a pressed steel frame of 90-inch wheel base. The wheels are 34 inches in diameter, with ball bearings in front and



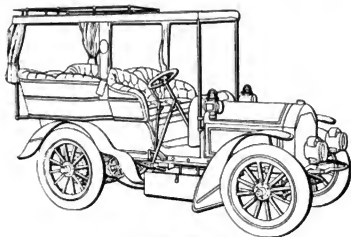
HOWARD LIMOTRINK

drive is through a propeller shaft with universal joints and bevel gears. The company also manufactures one and two-cylinder models.

**LACKAWANNA MOTOR CO.**—One car made by the defunct Conrad Motor Carriage Co., of Buffalo, both of the combination runabout-surrey type, with folding back seat, is shown. The motor, of the double vertical cylinder two-cycle type, is practically the same as when first introduced early in the season of last year.



BAKER IMPERIAL



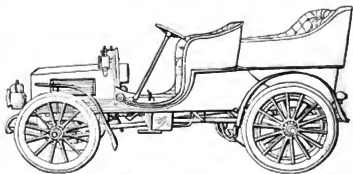
THE AFFERSON BROS. CAR

**AFFERSON BROS.**—Three models are shown at this exhibit. The largest is 40-horsepower and has four individual seats in the tonneau. The motor has four vertical individual cylinders with mechanical valves and is equipped with one foot feed vaporizer. The sliding gear transmission has four forward speeds and reverse. The differential is in the gear box and the final drive is by two outside chains. The car is geared at 45 miles per hour on the fourth speed with the motor at 750 revolutions. The second model is a four-cylinder car with a specially designed body resembling the king of the Belgians pattern, with rear seats for two and a third seat on the door of the tonneau. The front seats are individual and all are of aluminum. The motor is said to develop 25 horsepower. The rear wheels are 34 inches in diameter and the front ones 32 inches. The wheel base is 92 inches. The springs are semi-elliptic, 44 inches long. The two-cylinder car is of the regular touring pattern with seating capacity in the tonneau for four passengers and an extra seat on the door. The motor develops 24 horsepower at 950 revolutions. Sliding gear transmission with three speeds forward and reverse is used, controlled by one lever. The car is driven by a single roller chain. Wheel steering with nut and screw is used. This car weighs 2,400 pounds.

**WOODS MOTOR VEHICLE CO.**—All the vehicles exhibited, except the runabout, are built upon the Woods standard gear. This gear has two 5½-horsepower motors, and either side or front lever steering is used. Both front and rear axle are solid steel forgings connected by a forged steel frame. The motors are bolted close to the rear axle. By means of a single train of gears each rear wheel is independently driven by one of the motors. The single train of gears consists of a small pinion revolving with the rotating member of the motor and meshing with a large gear rigidly fastened to the rear wheel. The axles are slightly inclined downward and the wheel spokes are slightly bent outwards. These bear such an angular relation to each other that the lower spoke is perpendicular to the ground. The controller gives four speeds forward and reverse. There are two sets of brakes, one of which is operated by a reverse motion of the same lever that applies the power, and

the other is applied directly to the hubs of both the rear wheels and is operated by the foot. The runabout has but one motor and has a differential gear. The batteries used are either the Porter, Exide or Heliocarbon, unless some other make is requested.

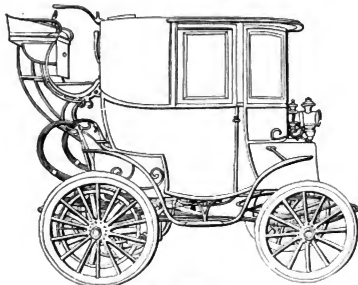
**KIRK MFG. CO.**—This exhibit has the Yale car. The front of the car is built on the Mercedes lines, with continuous coil radiator, surrounded by the hood. The hood and balance of the car is trimmed in brass. The frame of the hood extends about 3 inches below the body hangers, giving a filled-in appearance to the front of the car. The design is new and attractive. The engine is of the double cylinder, opposed variety, rated at 16 horsepower. One carburetor and one coil are used for both cylinders. The transmission gear is of the planetary type, similar to the one used on the 1903 model, but heavier. Two control levers are provided, one controlling the low and high speed forward, the other controlling the reverse and emergency brakes in the rear wheels. A foot brake lever also operates a brake on the differential. Single chain drive is used. Circulation of water is secured by a positive pump, mounted on the end of the two to one shaft. Jump spark ignition is used and all piping for water is of copper. Two battery boxes are provided, one being carried on each side step. The car is fitted with canopy top, glass front and side lamps. The finish is Yale blue lined with fine stripes of blue of lighter shade. The car is fitted with 32 by 3½-inch tires on the front wheels and 32 by 4-inch tires on the rear wheels. One Yale motor cycle is exhibited. The motor is made with balance wheel outside the case. The gasoline tank contains the carburetor, being constructed in the forward end of the tank, close to the cylinder head. Between the carburetor and intake valve is a throttle valve, the same being operated by a lever leading to the top of the tank. The spark control lever is mounted in the same manner. A flat rawhide



WOODS ELECTRIC TONNEAU

belt 1¼ inches wide is used for transmitting power to the rear wheel. The muffler is fastened directly under the motor, to the lower tube of the bicycle frame. The forks have extra braces running to the head and are mounted on a set of springs, to absorb vibration.

**TWOMBLY MOTOR CARRIAGE CO.**—That some makers of automobiles believe steam is the correct power for road vehicles is demonstrated in the production of the Twombly, which is something of a departure from the types heretofore shown in this country. One strong point is made in that there is not a single part of the car that can burn, the body being made from aluminum, the wheels from steel, and even the flooring is aluminum. The engine is horizontal and is a single acting four-cylinder compound, rated at 12 horsepower as a compound or a 24 horsepower direct acting. The cylinders are opposed and connected directly to a solid crank shaft. The engine is without crossheads, stuffing boxes, packing or piston rods and is entirely enclosed, with the working parts running in oil. The boiler, also, is horizontal, and a door opening from each side of the car provides access to the ends of the boiler, so that a tube may be expanded with no trouble. Besides an automatic regulator the car is provided with a water alarm, a Klinger gauge, and a fusible plug, which when burned will shut off the fuel and extinguish the fire. The valve can be screwed down and the car can be operated without the plug after being melted. The boilers are of the fire tube kind, supplemented by a flash coil containing 60 feet of ½-inch tubing placed directly over the fire, through which tubing the feed water passes on its way to the boiler. All the controlling levers—throttle, reverse and the high and low pressure cut out—are placed directly under the wheel on the steering post. Dials on the dash show the steam pressure, fuel supply, water supply. The feed pumps are enclosed, but the check valves are outside. The seating capacity of the car is for five people, being large and roomy, having a wheel base of 92 inches, and weighing 1,800 pounds. The fuel tanks

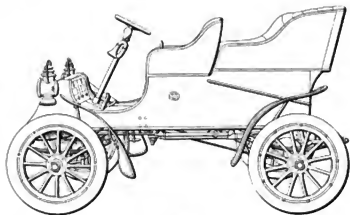


WOODS BROCTON

carry 12 gallons of kerosene and 18 gallons of water, sufficient, it is claimed, to run 150 miles. The car sells for \$2,500.

**MACK BROS. Co.**—The Manhattan car is a departure from the usual omnibus style in vehicles carrying from ten to thirty passengers. The car has a long drawn out surrey body with combination cross seats, each holding three or four persons. There is a tonneau, the entrance being either at the side or rear, as desired. The car exhibited has a seating capacity of twenty people, with entrance to the tonneau at the side. The wheels are 36 inches in diameter, of the artillery pattern, and with 4-inch solid tires. The transmission is by sliding gears with three speeds forward and a reverse. A cone clutch is used and double outside chain final drive. The foot brake acts on separate drums on the counter shaft and the emergency brake acts direct on the rear axle. The engine is four-cylinder, vertical, and both the inlet and exhaust valves are mechanically operated. The motor is rated at 36 horsepower at 600 revolutions. The cars weigh from 4,000 to 5,000 pounds.

**STUDEBAKER BROS. MFG. Co.**—All the Studebaker electric automobiles have certain characteristics in common. The frames of the running gears on the runabouts and studebakers are of tubular steel and are independent of the bodies. The wheels are of the artillery pattern and have double tube detachable pneumatic tires, except on the surrey, which has solid tires. The spring suspension provides full elliptic springs in the rear and semi-elliptic in front. On the single-seated vehicles one motor is used, which is suspended from the frame of the running gear. The drive is by chain. On the victoria and the surrey the running frame is integral with the framework of the body, which is heavily reinforced by steel rocker plates. The surrey has two motors, each rated at 12 amperes and 50 volts. Two separate brakes are provided on all the vehicles, one of which works on drums on the rear axle adjacent to the rear wheel hubs. The other brake works on



THE FORD

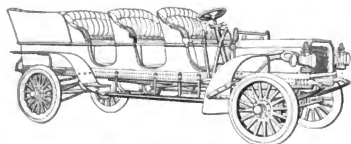
water and gasoline tanks grouped around the flywheel and planetary transmission case.

**BUCKMOBILE Co.**—One runabout is exhibited, finished in oak throughout. The frame is carried on two side springs. The platform has, in addition, two wood supports resting on each axle, almost parallel with the springs. The front axle, to accommodate the wood supports, is bent upward a short distance from the yokes, then is run across, forming an arch and allowing of more than ordinary clearance. The engine is of the double cylinder vertical variety, rated at 15 horsepower and carries a planetary gear on the outer end of its shaft. Two speeds forward and one reverse are provided for, and controlled by one lever. All valves are mechanically operated. Split rear axle, with single chain drive, is used. A surrey seat, detached, is exhibited, it being intended to mount on the platform back of the main seat. This is also finished in oak.

**THE FISCHER MOTOR VEHICLE Co.**—The exhibit consists of a heavy truck, the power of which is primarily furnished by a gasoline engine. To the engine is connected a dynamo which generates the power to drive the two motors, which in turn drive the rear wheels. A storage battery is carried for the purpose of storing surplus current. Under ordinary conditions the generator supplies the current direct to the motors, but when climbing a steep grade, where extra power is required, the battery is automatically thrown into action and assists the generator. The truck is fitted with rubber tires, extremely wide in cross section and has a capacity of 5 tons.

**C. L. CHARLEY**—On account of the recent newspaper notoriety given the importers' fight the Mercedes-Simplex formed no small attraction, and if the fight made will have any effect it will be to sell cars of all foreign makes. Several of the latest types are shown in the restaurant section. For 1904 the Mercedes people are putting out 20 to 24-horsepower, 28 to 32, 40 and 60-horsepower cars, and later in the season a specially long frame, for wide entrance, will be out. This firm is fitting its new cars with pressed nickel steel frames, but other than in design and details little change is apparent.

**VEHICLE EQUIPMENT Co.**—The exhibit is composed of one rear boot coupe, one landaulet, one straight front brougham, one victoria, two 5-ton trucks, one express wagon, one 3-ton and one 2-ton truck. The pleasure vehicles show handsome decorations inside and out. All cars exhibited were finished in dark blue with trimmings to match.

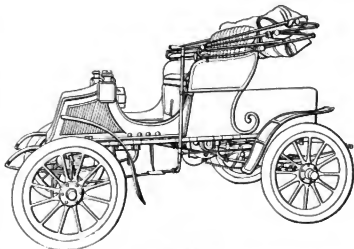


THE MANHATTAN

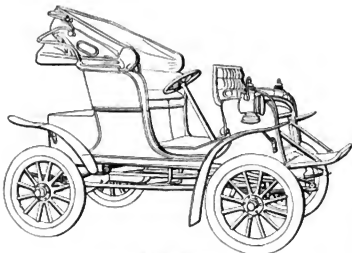
the counter shafts of the motors. The controllers give four speeds in either direction. The model C gasoline touring car has a horizontal, two-cylinder opposed motor with mechanically-operated inlet and exhaust valves. The motor is rated at 16 horsepower. Planetary gear transmission is used and the drive is by roller chain to a spur differential on the rear axle. Two forward and one reverse speed are provided. The wheel base is 7 feet 2 inches and the tread is 4 feet 8 inches. The wheel steering is irreversible. The model A is rated at 8 horsepower and is similar to model C in general construction. The gasoline delivery wagon uses the same running gear as above described.

**SIDNEY B. ROWMAN AUTOMOBILE Co.**—The Bayard cars, more popularly known as the Clement, after their maker, A. Clement, are exhibited in several styles and sizes, including the 12, 20 and 30-horsepower voiture legere class and the 20-horsepower carrosseries, the latter having glass front and folding top covering the entire car when up. While certain styles are shown and catalogued, announcement is made that any kind of bodies may be had. The frames of the Clement are of hydraulic compressed steel and are perfectly straight, the semi-elliptic springs on either end being fastened underneath. In the motor construction both the jump and make and break spark are used, according to the size of the motor. The usual sliding gear, operated with one lever, is used, and the cars bear the earmarks of the latest French construction all through.

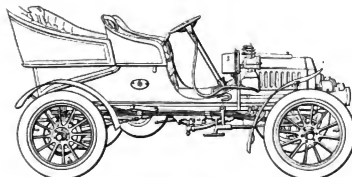
**FORD MOTOR Co.**—Ford racer 999, famous as the first car in the world to go a mile on a circular track in less than a minute, and more recently brought again into fame by reducing the straightaway record to 39.25 seconds, stands in its shapelessness in wonderful contrast to the little Ford runabouts and light tonneau cars. One can hardly realize that the two machines are the creations of the same designer. The regular Ford car is much the same as at the time it was described in Motor Age last August, having the angle steel frame supported by four full elliptic springs, with the double opposed cylinder motor mounted upon the left side of the frame near its middle, and with the



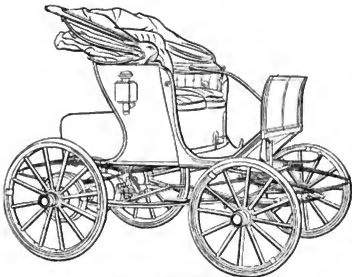
STUDEBAKER ELECTRIC



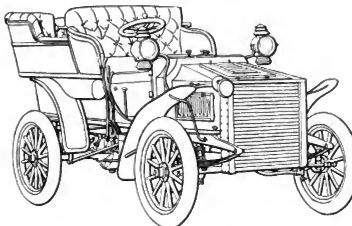
STEVENS-DURYEA



OLDS-TONNEAU CAR



BUFFALO ELECTRIC STANHOPE



WHITE STEAMER

**J. STEVENS ARMS & TOOL CO.**—In the Stevens-Duryea car the only change from last year is the addition of a double acting emergency brake operating on the rear wheel hubs. This brake works in both directions. The frame is of extra heavy tubing with four elliptic springs. The wheel base is 5 feet 9 inches, and the tread is 4 feet 6 inches. The motor is of the two-cylinder opposed type, developing 7 horsepower at 600 revolutions a minute. The cylinders are water-jacketed, the jacket being part of the same casting. The exhaust valve chamber is jacketed and is cast with the cylinder. The inlet valve chamber is a separate casting. The carburetor is of the float feed kind. The inlet valves are operated by suction. The ignition and throttle are regulated by hand and are entirely independent of each other. The lubrication of the motor is accomplished by means of a multiple gravity oiler mounted on top of the crank case. In the transmission the internal friction clutch is used, and the spur gears are always in mesh, there being an individual clutch for each gear. The final drive is by roller chain and the differential is of the spur gear type. There is one hand lever for all three forward speeds and the reverse speed. The body is of stanhope design with a capacity for carrying four persons. The motor is started from the seat by means of a short crank attached to the steering post.

**OLDS MOTOR WORKS**—The show visitors are generally familiar with the regular Olds runabout and delivery wagon; hence the magnets of the exhibit are the new convertible tonneau and touring runabout. The trade itself has been waiting for the Olds company to spring something along this line and so the two cars are generally interesting. The light tonneau car is driven by a single cylinder horizontal motor of 5½-inch bore and 6-inch stroke, rated at 8 horsepower. The motor is set with the cylinder head at the forward end of the machine under the footboard. The fixed half of the main bearings are set at an angle of 45 degrees, thereby taking the chain pull and the motor thrust upon a solid bearing. The worm gears are encased, running in oil. The construction is such that the cylinder can be removed from the crank case without disturbing any other part of the motor, or the crank shaft; flywheel and transmission gears can be lifted off without disturbing the rest of the motor. The wheel base is 83 inches. Roller bearings are used in all wheels. The induction coil and switch are placed on the dashboard. The bonnet is of sheet metal with brass trimmings, at the front being a honeycomb radiator, and inside are the water and gasoline tanks and batteries. The angle steel frame upon which the motor is hung completely supports the body, and as the body separates at the footboard it is easily removed. The bonnet, dashboard, brake levers and steering post all remain attached to the frame. The brakes act upon the hubs of the wheels and upon the differential. The steering apparatus is of the worm gear type, the steering post tilting back and forward at the axis of the gear, enabling the wheel to be adjusted. The spark and throttle levers are on the steering wheel. High and low speed are obtained by a side lever, and reverse and brakes by foot levers. The carburetor is of the regular Olds pattern. The touring runabout is of the same general design as the tonneau, but is lighter and built more along runabout lines. The motor is a 6-horsepower single-cylinder engine of 5 by 6-inch bore and stroke. The wheel base is 76 inches.

**BUFFALO ELECTRIC CARRIAGE CO.**—The stanhope which has for several years been this company's leader is substantially unchanged. The addition to the line is the electric tonneau, in which conventional tonneau lines have been followed and in which the batteries are carried entirely within the body. It was this car which made the recent run from Boston to New York, reported in *MOTOR AGE* at the time. The body is supported on platform springs and the wheels are 34 and 36 inches in diameter, front and rear respectively. The car is driven by two 3-horsepower motors, capable of an overload to 10 horsepower for a short period. The controller handle is directly under the steering wheel. The motors are suspended between the body and rear axle. The transmission is by spiral gears with expanding brake shoes inside. There are six forward and four reverse speeds. The maximum speed is 20 miles an hour.

**WHITE SEWING MACHINE CO.**—The White steam touring car with a canopy top is unquestionably the most interesting steamer on exhibition. It has been improved since last year, but not by radical changes. The tonneau is more luxuriously upholstered and is deeper and more roomy. A wind shield has been placed in the bonnet between the condenser and the engine, increasing the efficiency of both. Both of the automatic oil cups on the dashboard have been equipped with hand pumps. The spring suspension has been improved, as have also the universal joints in the transmission system, the latter affording greater wearing surface and more convenient means of lubrication. The live axle, which as before, is made of nickel steel, has been increased 3-16 inch in diameter. The gasoline tank capacity is 10 gallons and that of

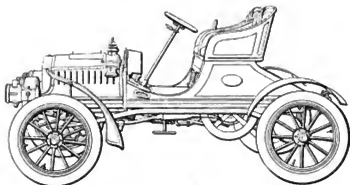
the water tank 15 gallons. It is said that this gives a running radius on one charge of 100 miles. The weight of the complete car is 1,600 pounds. In addition to the regular touring car and to a limousine model, the company has a delivery model.

**THE GIBBS ENGINEERING & MFG. CO.**—This exhibit is of an electric truck which is said to have accomplished several highly satisfactory test runs within the last few weeks. The machine is put out in any form of commercial body and is built in 3, 4 and 5-ton sizes. The running gear is of steel channel, hot riveted and with strong bracing. The body is separate from it, no part of the mechanism, control or wiring being a part of the body. Steel wheels have been substituted for the wood wheels previously used. The distribution of the weight has been altered to throw more of it than ordinarily upon the front tires. The design and size of the body is subject to the purchaser's specifications. The motor is flexibly supported underneath the running gear frame and drives to a countershaft, from whence the final drive is directly to the rear wheels by double side chains. The company is making an effort to introduce this machine into the heavy lines of street transportation and has made an effort to produce cars which may be readily adapted to the ordinary purposes of such traffic.

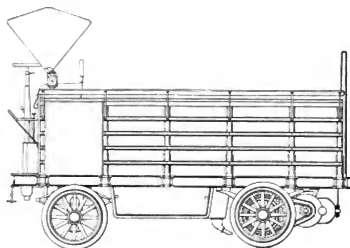
**H. H. FRANKLIN MFG. CO.**—While the remodeled light pattern of the Franklin shows several improvements upon the 1903 pattern in detail and especially in body design, the most interesting feature of the display is the chassis of the more recently developed 24-horsepower model, which characterizes the growth of the air-cooled motor from its customary small size to the proportions of a full-fledged touring car motor. The running gear construction is similar to that of the smaller machine, but heavier and with much more extensive spring suspension. The wheel base is 96 inches and the wheels are 32 inches in diameter. The motor, instead of setting across the front of the car as in the other pattern, is placed longitudinally as in the case of an ordinary four-cylinder water-cooled motor. The cylinder radiating ribs, instead of being cast onto the cylinder, are of copper, while the cylinders themselves are of steel, with both the exhaust and inlet valves in the top. The inlet valves are of the atmospherically operated type, the maker believing this style is best for air-cooled motors on account of avoiding complication. A fan is used to assist the air draft. The lubrication is by splash and the ignition is by a four-coil system with dry cells and magneto. The transmission gear is of the same planetary system as that of the smaller car, but is heavier. Two speeds forward and a reverse drive are afforded. The final drive is by propeller shaft and bevel gears. The car complete with king of the Belgians body weighs about 2,000 pounds.

**AUTOCAR CO.**—The new models exhibited show many improvements. Wheel steering has been adopted, the supporting pillar also carrying the controlling levers. Projecting to the left from the steering column is the clutch lever, the handle grip of which operates the throttle in the carburetor. Above the clutch control lever is the spark control lever, so mounted as to be within easy reach of the operator. To the right, from the steering column, projects the speed changing lever, which operates the sliding gears. Two brakes are provided, one being on the main shaft leading from the rear of the speed changing gear box, the other being the emergency brake, mounted on the rear wheel hubs. American roller bearings are used in the front wheels, rear axle and in the main bearings of the transmission gear, while ball bearings are used in the universal couplings in the shaft which leads to the rear axle. Bevel gear drive is used, the whole mechanism being enclosed in oil tight cases. The motor is 4 by 4 inches, double-cylinder, opposed type; the most noticeable change made in this part of the car is that the exhaust pipe from the right cylinder, looking from the front, runs over the engine and connects with the pipe leading from the opposite cylinder, from which point it is led back to the muffler located under the rear part of the body, but to one side. A lubricator, for the engine, is carried on top of the crank case, the feed being by gravity. The lubricator reservoir has glass ends, so that the quantity of oil contained therein may be determined. The radiator is of the Mercedes type, no water tank being used except what is formed by the top and bottom of the radiator. Circulation is secured by means of a positive pump. An internal expanding clutch is used in the flywheel instead of the cone clutch formerly made. The wheels are 30 inches in diameter and are fitted with 3½-inch Fisk detachable tires. The gasoline tank has capacity for 10 gallons. Two sets of Columbia batteries are provided.

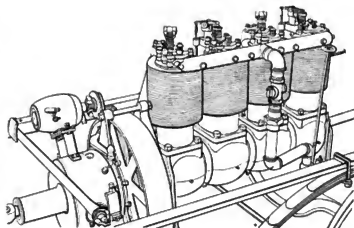
**CENTRAL AUTOMOBILE CO.**—The Mors is handled in America by this company and this machine is shown. The Mors is too well known to need more than mere mention. It differs from the majority of the French cars inasmuch as make and break ignition is used exclusively.



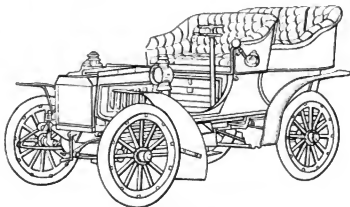
OLDS TOURING RUNABOUT



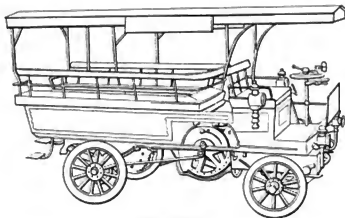
GIBBS ELECTRIC TRUCK



MOTOR OF FRANKLIN TOURING CAR



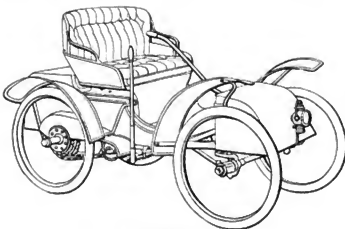
THE AUTOCAR



MOYRA WAGONETTE

In most other respects, however, the general French lines are followed, including pressed steel frames, four speeds, cone clutch and multiple tubular radiator, while the drive is by chain.

MICHIGAN AUTOMOBILE CO.—As long as the average car is wide, the little Michigan is with the smallest real car in the show. There has been little change in the car since last season, the principal alterations being to increase the fan used in connection with the vertical air-cooled motor and to increase the size of the springs and other running gear parts. The angle iron frame is supported by elliptical springs with coil spring bumpers. The wheel base is 54 inches and the tread 36 inches. The motor is a single-cylinder engine of 3½-inch bore by 3½-inch stroke, and is said to be capable of running well at 2,000 revolutions. It is rated at 3½ horsepower. The flywheels are within the casing. The transmission is by roller chain to a counter shaft. The high and low speed clutches are on this counter shaft and from each a chain runs to the rear axle. There is no reverse, the car being so short that it can be turned round in a 20-foot circle, or picked up and set down on the road facing the other way. The spark



THE MICHIGAN

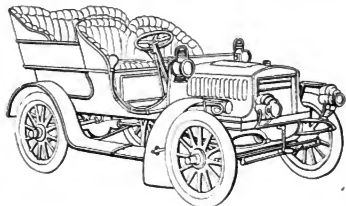
lead is manipulated by twisting the handle of the side lever controlling the gear changes. The weight of the car complete is 575 pounds. It is able to carry two grown persons and it is said that it can go 20 miles an hour.

PRESCOTT AUTOMOBILE MFG. CO.—The Prescott is another of the well known cars which does not differ greatly from the model of 1903. It retains the features of long flexible running gear, folding front seat forming the box dash and full equipment of conveniences such as steam pump and steam water lift for filling the water tank. The engine is heavier and of more power and the controlling mediums have been arranged so that the entire manipulation of working parts is from the seat. The burner includes a vaporizer which is said to increase the firing and consequently the steaming efficiency. What is called an anti-freezing construction of the water system is one of the notable features, especially at this time of the year.

CONSOLIDATED MOTOR CO.—This concern is the successor to the Moyra Automobile Co. and is making a specialty of commercial cars of the gasoline type. In the 1904 cars the transmission is by means of a friction wheel against two rotating discs, the axle of the friction wheels being extended past one side of the frame, upon which the chain sprocket is carried. The simplicity of the transmission scheme is generally admitted, and the company claims that with a car fitted

with the 7-horsepower motor there was no difficulty in carrying a load of 3,000 pounds and starting and stopping. Instead of jump spark the make and break form is used, with an oscillating dynamo to generate the current. While only one car is shown, the company states that it is prepared to furnish touring cars, omnibuses, delivery wagons and any sort of top required.

SANDUSKY AUTOMOBILE CO.—The Corrier is offered in two patterns, but the really new one is model B, which, like the other, is a runabout, but with an oval top, square bonnet instead of the sloping box front. It has a rectangular frame support on elliptical springs, instead of on side springs as in the older pattern. It is driven by a horizontal motor of 4½-inch bore and 5½-inch stroke and rated at 7 horsepower. The inlet valves are mechanically operated and are of unusually large size. The transmission is through a simple sliding gear placed on the extension of the motor shaft, the set being disposed similarly to the usual planetary gear set of runabout construction. The secondary shaft is above the main shaft and none of the gears are

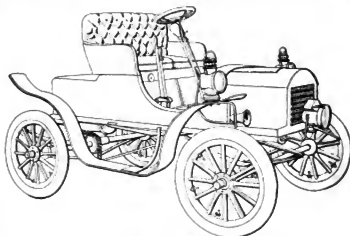


THE WOLVERINE

incased. The car is simple in construction and is stout in all particulars. The wheel steer is the regular equipment of the model B and on the other model either wheel or center lever steer will be provided.

REID MFG. CO.—The Wolverine is a moderate weight tonneau car driven by a 15-horsepower, double opposed horizontal motor placed across the front end of the running gear. The transmission is by a standard form of sliding gear, furnishing three forward speeds and a reverse. The car is fitted with roller bearings throughout. The one particular novelty of the car is the double rear platform, forming a compartment several inches high underneath the tonneau floor. This space is reached through a trap door under the front seat and is useful for carrying extra tires, rain coats, and other luggage.

COVERT MOTOR VEHICLE CO.—The Covert is another of the once extremely small cars which have grown to the proportions of a stout runabout. It is driven by a single-cylinder, vertical air-cooled motor with a water-cooled head. The fly wheels are enclosed. The motor is rated at 6½ brake horsepower. The motor is placed under a bonnet and driven through a sliding gear transmission which furnishes two forward speeds and a reverse, driving direct on the high speed. The running gear is of angle steel, mounted upon four full elliptical springs. The rear axle is of 2-inch steel tubing with the compensating gear entirely incased. The sliding gear mechanism and final bevel

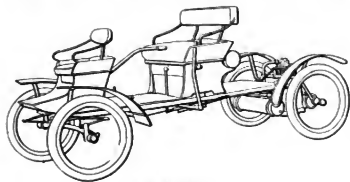


COVERT MODEL B



drive are increased in an extension of the differential case, the connection from the motor being by universal joints and propeller shaft. The front axle is of steel tubing reinforced its entire length by a flat bar of steel. The wheel base is 72 inches and the track 48 inches. The wheels are wood and run on ball bearings. The radiator is of the cellular pattern. There are two brakes, one on the differential and one on the transmission shaft. The latter is so connected that application of it is simultaneous with the release of the clutch. The body is well made and finished, and emulates in miniature the popular king of the Belgians style.

**WALTHAM MFG. CO.**—The Orient buckboard is of the same general appearance as before, but is larger and has several desirable improvements. First of all, the direct drive has been replaced by a compact two-speed gear. The muffler is larger and more effective and the main driving gear is of fiber instead of metal. The machine thus runs more quietly than did those sold last year. At the rear the frame is supported by a spring instead of being rigidly attached to the rear axle, while full elliptical springs have been placed in front. A spring cushion has been added to the seat back and the seat itself is wider. A regular



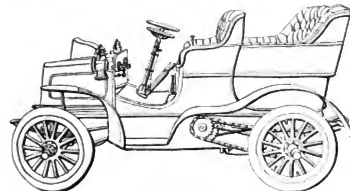
ORIENT BUCKBOARD

motor starting crank replaces the strap device, and the main platform is 2 inches higher from the ground. Aside from the standard pattern, the company shows two machines with useful attachments, one an additional folding front seat and the other a parcel delivery box which is placed back of the driver's seat.

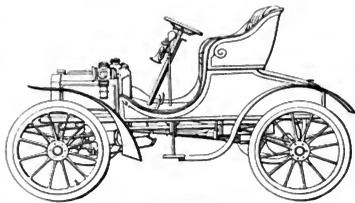
**COLDWELL LAWN MOWER CO.**—It cuts grass 40 inches at a time and it is propelled by a typical automobile steam boiler and engine, this Coldwell lawn mower. Forming a part of an exhibition of automobile possibilities of the next 5 years. The mower is driven by an 8-horsepower engine and is said to be capable of a speed of 8 miles an hour. The mower has been in use in the park systems of several large cities and as it will do the work of three horse-drawn mowers, it is a practical as well as an anticipatory machine.

**DE DION BOUTON CO. AND KENNETH SKINNER.**—But one of the popular de Dion cars is shown by the American agent, Mr. Skinner. This is a voiturette having an 8-horsepower motor.

**GROUT BROS. AUTOMOBILE CO.**—The Grout steamer is shown in a regular touring car pattern of 86-inch wheel base. One of the principal improvements in the steam power plant system over last year is the addition of a condenser. The fuel tank is also larger and the construction as a whole is heavier and the tires larger. The engine is of 10-horsepower and is of two cylinders, which are horizontal. The control is by a throttle regulator on the wheel, which allows the control of the engine to be made without removing the hand from the steering wheel. The boiler is in front under a bonnet, with a special air draft.



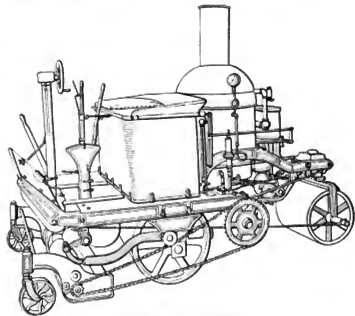
GROUT STEAMER



THE COVENT

Both the boiler and engine are fitted with the approved automatic devices. The boiler is of the regular Grout fire tube pattern. The drive is by chain from the engine to a counter shaft and from the counter shaft to each rear wheel individually.

**HOLLEY MOTOR CO.**—The little car which the Bradford concern shows has all the earmarks of careful planning and workmanship. The frame is of angle iron, semi-elliptical springs, tubular axle trusses and split. The motor, a single-cylinder Holley, with Holley carburetor, is placed under the bonnet and connects the Upton speed change gear by means of a bevel gear, the transmission to the differential being by means of a chain. The water tank is located just back of the motor and radiator of the roll pipe type is in front, the starting handle being also in front. The gasoline tank is located under the seat. The machine is fitted with a wheel for steering, and

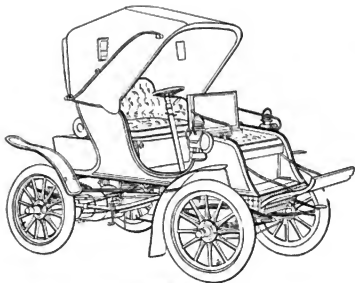


COLDWELL STEAM LAWN MOWER

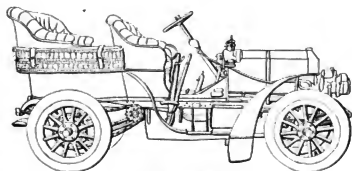
on the steering mast the mixture, spark and throttle control levers are neatly located, with the control lever on the right side. On either side of the steering mast is the foot clutch and brake levers. The wheels are 28 inches and the tread about 40 inches. The workmanship of the chassis is exceedingly good.

**STANDARD MOTOR CAR CO.**—This firm is the successor to the U. S. Long Distance Automobile Co. and shows a four-cylinder touring car and a six-cylinder marine motor. The car has a pressed steel frame, semi-elliptic springs and 34-inch wheels. The motor is of 4½-inch bore by 5½-inch stroke and is fitted with make and break ignition. There is the usual fan back of the Chelsea cellular radiator, and back of the fan is a partition which prevents the dust from blowing upon the motor, it being forced down underneath the car. There is no tight crank case for the engine, the only protection being a sheet metal pan under the engine and the transmission gear. The engine is started with compressed air. The body of the car is a big one of the king of the Belgians pattern.

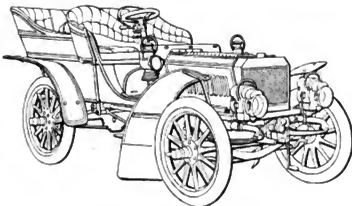
**GEORGE N. PIERCE CO.**—The Pierce Arrow in two sizes, and the Pierce stanhope are shown. The last named needs little description, being substantially the same as last year. The two-cylinder Arrow is



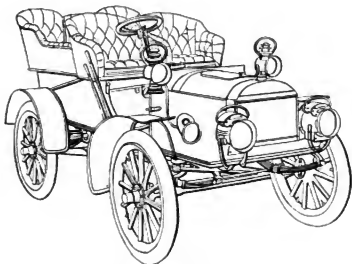
PIERCE STANHOPE



THE POPE-ROBINSON



PIERCE TWO-CYLINDER ARROW

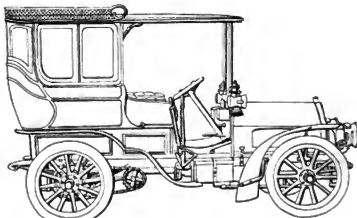


MODEL TOURING CAR

like that used in the endurance run, while the four-cylinder is that described last week in *MOTOR AGE*. In the stanhope the most noticeable improvements are a flat face internal clutch, wheel steering and the optional fitting of a coupe glass top, making the car an especially desirable one for a doctor. The two-cylinder car has the same tubular frame construction and the same general system of power plant and transmission, but the bevel gear drive being retained substantially in the same form. But the bonnet is made square, with a cellular radiator in front and the rear body is of the king of the Belgians pattern. To the motor mechanically operated inlet valves have been added.

J. H. SPRINGER—Exhibits a touring car, fitted with a 12-horsepower horizontal double-cylinder opposed type of motor. The cylinders are 4 by 5 inches. The engine is set lengthwise of the vehicle, under the seat, and connects to a three-speed, sliding gear transmission. From the sprocket on the transmission gear, chain drive is used to a differential on a counter shaft, from which side chains connect the rear wheels. The frame work is of pressed steel. All valves are set vertically and are mechanically operated. Plain bearings are used throughout. Aluminum bodies are exhibited, one being a king of the Belgians pattern, finished in blue and silver. It seats seven passengers.

POPE ROBINSON Co.—New features and improvements since last season are jump spark ignition, sliding gear transmission, larger tires, longer springs, longer wheel base, improved channel steel frame, increased power, aluminum body, right side operation and reduction of weight by about 600 pounds. The wheel base is 96 inches, and the wheels are 34 inches in diameter, with 4½-inch tires. The four-cylinder motor is under a Mercedes pattern bonnet. Its bore and stroke are



SMITH &amp; MABLEY LIMOUSINE

4 and 6 inches respectively, and it runs normally at 750 revolutions. The driving clutch is of the expanding variety and is of large diameter. The sliding gear transmission is not novel, but possesses the typical virtues of safety interlocking devices with the clutch, etc. The body design and equipment renders the car suitable for touring, as it is roomy and comfortable.

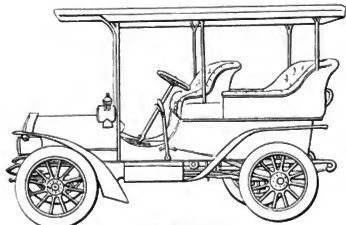
MODEL GAS ENGINE Co.—Several weeks ago *MOTOR AGE* described the 12-horsepower Model light tonneau. At that time the car which chiefly characterizes the show display was not ready—a 16-horsepower car of similar general construction, but larger throughout and with a square, oval top bonnet instead of a curved box front. The principal feature of the car is the transmission gear, which furnishes three forward speeds and two reverse speeds through the medium of a simple device in which there is a relatively small number of gears, rolling friction clutches being brought into play in the making of some of the speed changes. The five speeds are obtained by two levers. The final drive is by a single chain. The motor is of the double opposed pattern, of 4½-inch bore and 7-inch stroke. It is said to develop 16 horsepower at 900 revolutions. The valves are mechanically operated.

SMITH & MABLEY.—Among the handsome Renaults and other well known French machines exhibited and sold by Smith & Mabley, is an 18-horsepower car of their own construction. This comprises a four-cylinder motor chassis, which weighs complete 2,800 pounds, and which may be equipped with various sty body bodies, being capable of taking passenger bodies of from two to seven people. The wheel base is 91 inches and the tread 53½ inches. The frame is 114 inches long with a body space of 35 by 79 inches. The motor is hand and foot throttled and is said to be capable of running from 200 to 1,200 revolutions, its normal speed being 800. The water circulating system includes an up-to-date honeycomb radiator. The carburetor is of the

newly popular form in which the proportion of air and gasoline is supposed to be automatically regulated by the varying speed of the motor.

**HOLLANDER & TANGEMAN.**—The F. I. A. T. is a long, comfortable car, having optional wheel bases of 90 and 114 inches. The frame is of pressed steel, narrowed in front to permit of a wide arc of steering wheel swing. All of the main bearings of the running gear and transmission are ball. The motors are four-cylinder uprights and are in three sizes, ranging from 16 to 60 horsepower. The fuel is supplied through a float feed carburetor under pressure from a special pressure tank under the rear of the chassis. The ignition is of the make and break type, with a magneto furnishing an alternating current. The motor control is entirely by a pedal. The radiator is of the Mercedes style and is cooled by a fan on the periphery of the motor flywheel. The driving clutch is expanding, metal to metal, and the transmission is by sliding gears. There is a brake on the differential and emergency expanding brakes on the rear wheels. A single lever controls the four forward and reverse speed changes. In bodies the purchaser has the choice of four styles seating five people and of larger sizes for six and eight passengers.

**HAYNES-APPELSON CO.**—The king of the Belgians pattern tonneau car is characterized for this year by a longer wheel base, larger radiator and stronger springs than used last season. The frame is of angle iron, with a tubular sub-frame. Artillery wheels are used, which run on roller bearings front and rear. The springs are semi-elliptic. The motor is of the double opposed cylinder pattern, of 5½-inch bore and 6½-inch stroke. It runs at from 150 to 1,200 revolutions per

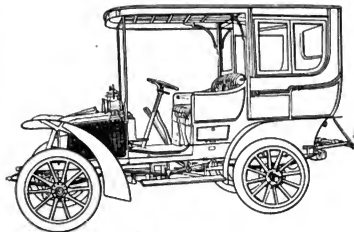


THE HAYNES-APPELSON

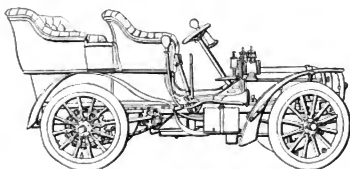
minute. The ignition is by jump spark and batteries. The lubrication feed is by a geared oil pump. The transmission gear is of the form which has characterized all the Haynes-Appelton cars—the spur system with individual clutches furnishing three forward speeds and a reverse drive. Roller bearings are used throughout the machine. A feature of the steering mechanism is the adjustable steering wheel. The company also shows new patterns of its lighter cars, these in construction being chiefly characterized by a longer wheel base, a new style of rear axle and more powerful motors.

**REGAS AUTOMOBILE CO.**—The Regas is shown in two patterns, one with a two and the other with a four-cylinder motor. The construction is similar, the chief peculiarity of each being the system of air cooling of the motor. This is of the oblique cylinder pattern, with the crank shaft longitudinally of the car. Projecting from each cylinder are 172 perforated copper tubes, 1½ inches long by ½-inch in diameter. These tubes not only provide a large radiating surface but are supposed to create an excellent circulation around the cylinder wall, after the principle of operation of the Bunsen burner, it being shown that the passage of the hot air from the tubes draws cold air into them through the perforations. Each tube is flanged to fit the cylinder closely and they are all held in place by a perforated sheet steel jacket. The transmission is of the individual clutch spur gear pattern, with double chain final drive. The body is characterized by a side entrance to the tonneau, formed by making the left forward seat so that it may be tilted downward and forward to allow entrance through the door in the side wall of the tonneau.

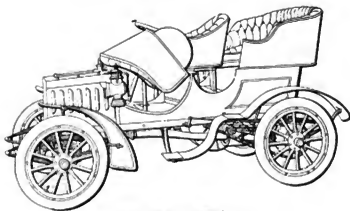
**GEORGES RICHARD-BRAZIER.**—This concern is located in the restaurant section, among the other foreigners, and contains a tonneau with top and a larger car with full back seat and side entrances, the only thing of the kind shown in the building. Seats are also arranged on the doors, making a carrying capacity in the back portion for five people.



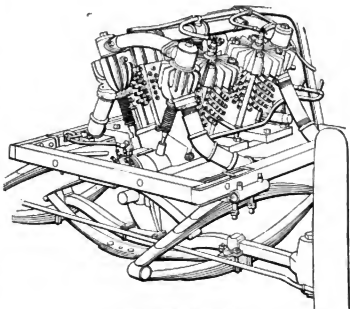
RENAULT LIMOUSINE



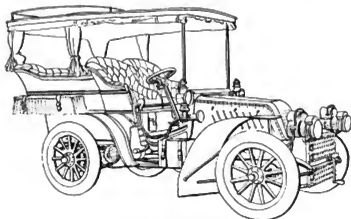
THE F. I. A. T.



REGAS FOUR-CYLINDER CAR

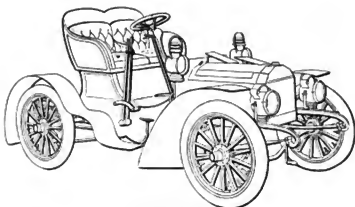


REGAS AIR-COOLED MOTOR



COLUMBIA TOURING CAR

THE ELMORE MFG. CO.—The Elmore for 1904 is substantially the same as that of last year, with the exception that it is fitted with a new carburetor and with jump spark instead of make and break ignition. The principal features of the new carburetor is an adjustable air shutter, whereby the suction of air and gasoline are balanced at different motor speeds. The motor is, of course, the two-cycle motor which has always characterized the Elmore construction. In the newest model the bore is increased  $\frac{1}{2}$ -inch over that of last year's machines. The transmission is that of the planetary system, furnishing two speeds forward and reverse. The toggle joints which actuate the transmission brake bands have so much leeway that they need atten-



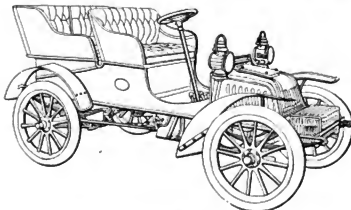
THE JONES-CORBIN

speed passes 450 revolutions it is controlled by a governor. Each pair of cylinders has an individual crank case which may be removed without disturbing the other. The inlet valves are mechanically operated from the same cam shaft as the exhaust valves. The carburetor is of the popular style in which the mixture is regulated according to the speed of the motor. The sliding gear transmission set is strong and has the usual interlocking devices to render it impossible to make damaging shifts. The steering gear is a new adaptation of the worm gear device. The car is equipped with either a canopy top or a limousine. Supplementing this car is the new two-cylinder Columbia which was recently described in MOTOR AGE. The electric line consists of a new, extremely light runabout, a victoria, a victoria phaeton, an extension front brougham, a landau, a 2,000-pound capacity delivery wagon, and a delivery wagon chassis that may be adapted to several styles and sizes of commercial bodies.

JONES-CORBIN AUTOMOBILE CO.—This newly organized company shows the same fetching little single-cylinder upright light car that was made by the previous Jones-Corbin company at the time of its failure. A four-cylinder car of similar design is also made.

THE FREDONIA MFG. CO.—The Fredonia does not differ greatly from that of last year, being a light touring car driven by a single cylinder, 6 by 6 $\frac{1}{2}$ -inch engine, the principal feature of which is the auxiliary exhaust port which is uncovered by the piston at the end of each outward stroke. The running gear is of the channel iron form with full elliptic springs. The wheel base is 84 inches and the wheels 30 inches in diameter. The body may be of the divided seat two passenger style or the same with a tonneau. The transmission is of the two-speed and reverse planetary type, in which the speed changes are made by the same lever and the brake and reverse control by a pedal.

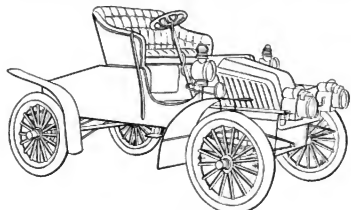
CREST MFG. CO.—The new Crest is exteriorly and in general construction much like the Crestmobile of 1903. It has been made longer and of wider tread and is driven by a more powerful motor. This, as formerly, is a single-cylinder upright placed in front of a conventional bonnet. The vertical radiating ribs have been replaced by annular ribs and the efficiency of the air cooling is enhanced by a belt driven fan. The motor is rated at 8 horsepower. It runs slower than the old Crest motor, and the fly wheels, though still within the crank case, are heavier. The inlet and exhaust valves are mechanically operated. The final drive is by the same system of propeller shaft and bevel gears used in the previous model. The high speed is by direct drive through an expanding ring clutch. The low speed is obtained by



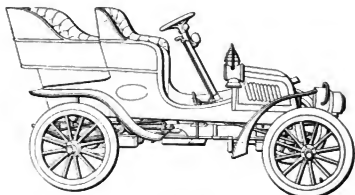
THE ELMORE

tion only at rare intervals. The speed changes are controlled by a side lever. There are three brakes, one on the transmission gear and one on each side of the differential.

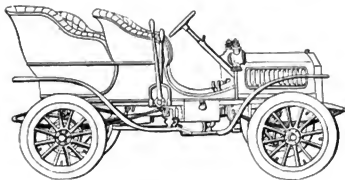
ELECTRIC VEHICLE CO.—Most prominent in the gasoline section of the company's display is the new 30-horsepower, four-cylinder touring car. It is similar to the gasoline touring car of last season, but incorporates several changes made as the result of the season's experience. The wheel base has been increased to 100 inches and the wheels are 34 inches in diameter. A pressed steel frame is another change and upon it the foot board and dash are mounted rigidly, being entirely distinct from the body. The bore and stroke of the motor is 5 inches and the normal speed between 800 and 900 revolutions. When the



THE FREDONIA



THE CRESTMOBILE



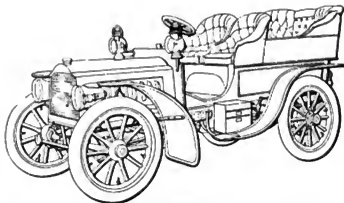
NATIONAL GASOLINE CAR

a friction band controlling a set of reducing gears. The reverse is obtained through a planetary gear system. As formerly, the whole power plant and transmission gearing is supported upon the running gear independently of the body, the latter being suspended on two elliptical rear springs and an X front spring.

**NATIONAL MOTOR VEHICLE CO.**—The star of the exhibit is the new gasoline car. This is a 24-horsepower touring car of approved lines—oval top bonnet, pressed steel frame, etc. The axles are tubular and are 86 inches apart. The wheels are 30 inches in diameter. The frame is supported by 40-inch half-elliptic springs in front, and by full elliptics of the same length in the rear. The motor is of four cylinders of 3½ by 4 inches, individually mounted on an aluminum crank case. The inlet valves are mechanically operated. The ignition is by jump spark with quadruple vibrator coil and commutator on the dash board. The driving clutch is of the self-contained cone variety, and the transmission is by a simple three-speed sliding gear set. The final drive is through a propeller shaft and bevel gears. Application of either the transmission or rear wheel brakes disengages the clutch. In changing speeds by means of the side lever the clutch is released automatically. The water cooling system includes a cellular radiator with forced draft fan. Six electric carriages are also shown. One of these, the largest, is especially built for equipment with the Edison battery, if desired.

**STANDARD AUTOMOBILE CO.**—All of the Deauvilles are alike so far as chassis construction is concerned, and each is, accordingly, chiefly characterized by the pressed steel frame which includes a pressed steel pan underneath the front half, this pan forming at once the support for the motor and transmission gear and a dust proof casing for all of the running parts. The lower half of the motor crank case and that of the transmission case are of aluminum, and formed of one casting, which sets into the pressed plate and is rigidly attached to it. All of the chassis but one have four-cylinder motors which are typical of modern French construction, having mechanically operated inlet valves, throttle governor, enclosed commutator, etc. The final drive of all models but one is by propeller shaft and bevel gears. The exception is the 40-horsepower car, which has double side chain drive. Each of the six sizes of chassis may be fitted with different patterns of bodies.

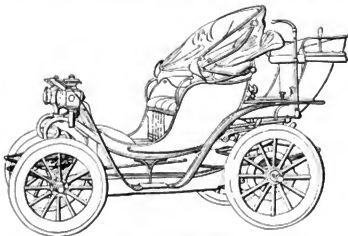
**PACKARD MOTOR CAR CO.**—The exhibit comprises two radically distinct styles of cars, one of the model F Packard, the good old, reliable, single-cylinder boy that made the Packard reputation and which ran from San Francisco to New York last summer under the guidance of Tom Fitch. This is not changed in essential features for 1904. The other type of construction is illustrated in somewhat different manners by models L and K and the Gray Wolf. All have four-cylinder vertical motors in front. The model L is substantially the Gray Wolf with road body and equipment. It has the same pressed steel frame, 22-horsepower motor and sliding gear transmission contained in the rear axle. The motor is of 3¼-inch bore by 5¼-inch stroke, with the cylinders cast in pairs. The clutch is of the expanding type within the fly wheel. The whole transmission from the motor to the



PACKARD MODEL L

rear axle runs on ball bearings. There are four band brakes all located upon the driving wheel drums. There is no brake on the engine transmission or differential. The wheels are 34 inches in diameter, and the suspension is of the well known style of three semi-elliptical springs, in which the front spring is placed cross wise of the vehicle above the front axle. The model K has a sliding gear transmission under the body and a final drive secured through a propeller shaft with universal joints. The wheel base is extremely long and the wheels are 36 inches in diameter. This is the chief aristocrat of the Packard family and will be equipped with any kind of body desired by the customer. The Gray Wolf needs no explanation, its chief excuse for existence being a kilometer in 29 2-5 seconds and a mile in 46 2-5 seconds.

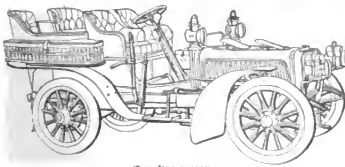
**SPRINGFIELD AUTOMOBILE CO.**—The one Springfield car which is shown is made with laminated wood frame and has a 72-inch wheel base and 54-inch tread. Thirty-four-inch semi-elliptic springs are used in



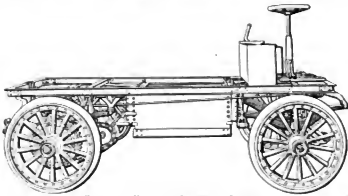
COLUMBIA VICTORIA PHAETON

front and full elliptic 36-inch in the back. The car is fitted with what is claimed to be an irreversible wheel, steering through a Brown-Lip gear. The body is made of wood, with high back tonneau. The motor is of the horizontal type, 8-horsepower, the cooling being by pump and a 14-tube radiator. The transmission gives direct drive on the high speed. Lubrication is automatic and the motor is governed by both the spark and throttle.

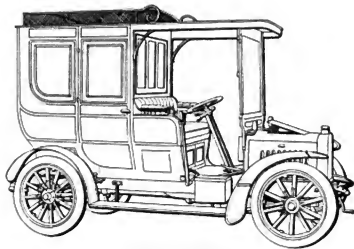
**F. A. LA ROCHE & CO.**—The American agent for the Darracq shows the popular French car in its latest patterns, the four-cylinder model being the leader. High finish of working parts, as well as body, is



THE DEAUVILLE



COLUMBIA ELECTRIC DELIVERY CHASSIS

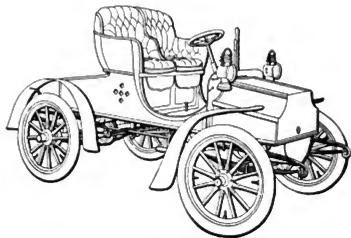


DABRACQ LIMOUSINE

one of the features, while the chief constructional change since last season is the addition to the pressed steel frame of a sheet steel bottom web to form a tight fitting support for the motor crank box and the transmission gear case.

RODGERS & Co.—The Imperial is another addition to the ranks of the air-coolers. It is of the stout runabout pattern, with the chassis rigged either as a runabout, doctor's wagon or delivery wagon. The motor is a double-cylinder horizontal placed across the front under a peculiar hood. The air cooling property of the regular copper ribs is enhanced by a fan, while a ventilator on the crank case provides for the alternate drawing in and expulsion of air to cool that part of the motor. The transmission is by sliding gears and propeller shaft, with bevel gear final drive. The springs are long, the makers, as old carriage builders, having been consistent to their trade in building for comfort as well as efficiency. The car is equipped with 30-inch Midgley wheels.

THE E. R. THOMAS MOTOR CO.—This exhibit is one of the surprises of the show. The Thomas company having been known so extensively as the builder of light tonneau cars, naturally created somewhat of a sensation in the trade when it sprang upon it a full-fledged touring car of 24 horsepower and of essentially modern construction. This new car was fully described in MOTOR AGE a few weeks ago. Briefly, its chief characteristic is a three-cylinder vertical motor. This style of construction was chosen after a careful mechanical research, both in America and abroad, the Thomas company having come to the conclusion that the three-cylinder motor is bound to be popularized. The construction of the entire machine is stout, and particular attention has been paid to the support of driving members and to the support and rigidity of bearing supports, that there may be no inter-acting strains in the various propelling elements. The transmission gear is of the sliding gear pattern driven by a self-contained fly wheel clutch, and driving, through bevel gears, a cross counter shaft from which two side chains extend to the rear wheels. The principal feature of the transmission is the sliding gear device whereby, when the direct or higher speed engagement is made, all of the secondary shaft gears are thrown out of mesh to prevent the running of idle gears. The clutch and back levers are so interlocked that when either the emergency brake or the pedal brake is applied, the clutch is simultaneously released. The body is stylish, with the approved motor bonnet. Supplementing the regular body, however, is a covered body which is called the Thomasine, being somewhat on the limousine order. The four sides of the tonneau may be closed or the glass sides may be folded upward to form an open canopy top car. The Thomas company also

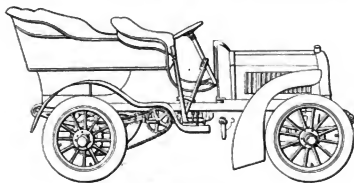


THE IMPERIAL

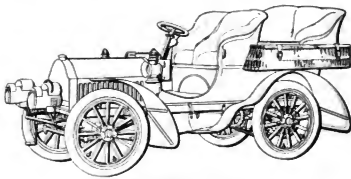
shows its new motor bicycle, which is driven by a 3-horsepower motor mounted in line with the seat mast as formerly. It is provided with a new carburetor and with a new system of handle bar control. The frame is of the same truss spring fork and cushion rear frame construction, which has proven entirely successful. The rear wheel is driven by the Thomas combination steel and leather belt which was devised to combine the good features of chain and belt transmission.

THE LOCOMOBILE CO. OF AMERICA.—The 16 to 22-horsepower touring car is the center of the display, which also includes a two-cylinder gasoline car and a full line of Locomobile steamers. The principal improvements in the four-cylinder car over the corresponding pattern of last year are longer springs and wheel base and larger tires; foot throttle in addition to hand throttle; ignition batteries charged from a dynamo, and a new commutator, new coil and new vibrator. The kerosene hand pump used last year for the purpose of cleaning the cylinders has been discarded, in favor of the ordinary method of injecting kerosene through the compression cocks. The car has a channel steel frame cut to angle form at the ends. The side bars are rivetless. The springs are semi-elliptical, the rear ones being 44 inches long. All the wheel bearings are plain. The axles are solid forgings. The cylinders are 4 by 5 inches and the motor runs at normal high speed of 900 revolutions. The crank case is of bronze. The cylinders are cast in pairs with continuous water jackets. The inlet valves are automatic, the ignition is by jump spark with the current furnished by the batteries, of which there are four cells equipped with automatic switches for recharging from the dynamo. The governor acts upon the throttle. The radiator is of the cellular pattern. The driving clutch is of the self-contained, conical pattern and the sliding gear set is in a bronze casing. The gears are all of steel. All of the essential elements of the transmission are increased. The final drive is by double chain from a cross counter shaft support by universal joints. The cars are finished in several styles, the company keeping different patterns on hand in gray, ready to finish upon order. The two-cylinder car is much the same throughout as the larger car, with the exception that it does not have the dynamo for recharging batteries.

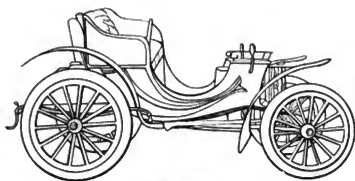
DURYEA POWER CO.—This is the same old Duryea with which the trade is so familiar. This is so typical of its constructor, Charles S. Duryea. The same three-cylinder inclined motor with the transmission gear and all essential factors of the power plant arranged in a compact group over the rear axle, is retained, as is also the general form of the phaeton. To this body, however, there has been added a folding rear seat. Changes for the new season are an improved muffler, a more flexible front running gear, longer springs, natural and



THOMAS "FLYER"



FOUR-CYLINDER LOCOMOBILE

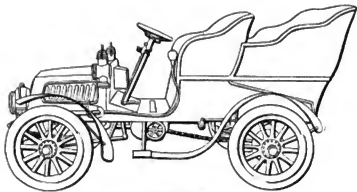


DURYEA PHAETON

pump water circulation with radiator, and either jump spark or make and break ignition. The car comprises a wood body with an iron frame which supports the power plant, and a tubular subframe in front for the attachment of front wheels. Semi-elliptical rear and one-quarter elliptical front springs are used. The rear wheels are 36 and the front wheels 30 inches in diameter. The wheel base is 81 inches and the tread standard. The bore and stroke of the motor is  $4\frac{1}{2}$  inches and the three cylinders running at 1,000 revolutions a minute are rated at 12 horsepower. The chief peculiarity of the motor construction is the screwed-in cylinder head, probably the only head of its kind at the show. The transmission is the regular Duryea planetary system. The control is also well known, being the one hand system in which the steering, the throttle regulation and the high and low speeds are accomplished by the manipulation of one lever.

NORTHERN MFG. Co.—The Northern is another builder of runabouts to come to the front this season with a touring car. This is made on conventional lines but is light, weighing but 1,500 pounds. The motor is of  $4\frac{1}{2}$ -inch bore and stroke. The entire transmission gearing is mounted in the motor crank case. The final drive is by bevel gear and propeller shaft, which is arranged in a peculiar manner to avoid the use of universal joints. A feature of the braking system is the self-locking pedals, which may be set and the foot lifted without releasing the brakes. The wheel base is 84 inches and the wheels 30 inches in diameter, fitted with  $3\frac{1}{4}$ -inch tires.

EISENHUTH HORSELESS VEHICLE Co.—This company shows the compound gasoline car which was developed and brought out by the Graham-Fox Motor Co. Its chief peculiarity is, of course, the compound gasoline engine with two four-cycle, high pressure cylinders, and a low pressure two-cycle cylinder between them. The motor is connected directly to the transmission gear box by universal couplings, and the clutch is within the gear box that it may run in oil. The differential on the cross counter shaft is also in the casing. There is but one side lever, which is used to apply the emergency brake. The speed changes are made by a wheel under the steering wheel. The running gear is of the channel iron style in which the channel is formed by side plates and angle irons. The wheel base is 112 inches. The wheels are 36 inches in diameter and fitted with 5-inch tires. The high pressure cylinders are of  $7\frac{1}{2}$ -inch bore and 6-inch stroke. The construction of the cylinder heads and valve chambers is somewhat peculiar owing to the requirements of compounding. The valves are flat seated. Two spark plugs are used in each high pressure cylinder to give quick ignition. The clutch is made of two metals and is in the form of a drum into which shoes expand. The faces are not smooth, as ordinarily, but are in the form of saw teeth, giving a large area. The exhaust from the high pressure cylinders, through the low pressure cylinder to the muffler, reduces it to about 25 pounds pressure at the entrance of the



DAWSON TONNEAU

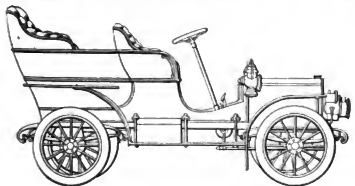
latter. The muffler is therefore simple and not liable to create back pressure. The car throughout presents many interesting departures from ordinary construction.

AUTO IMPORT Co.—This concern, which is an agent for the Rochet-Schneider machine, exhibits in the basement one of the foreign cars, a description of which appears elsewhere.

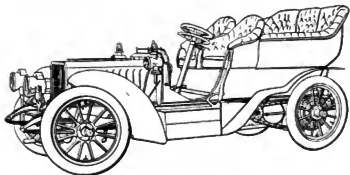
J. H. DAWSON MACHINERY Co.—The Dawson car is a new one from the west, introduced this year after extensive experiment quietly carried on by the maker. It was described recently in MOTOR AGE. It is of the light tonneau order, driven by a 15-horsepower, two-cylinder vertical motor. This has mechanically operated inlet valves placed upon the same side of the cylinders as the exhaust valves and operated by the same cam shaft. The motor, instead of being placed with the shaft longitudinally of the car as in ordinary construction, is placed crosswise and drives the transmission gear with a chain, the gear also being crosswise of the car. The speed changes are made through individual clutches while the reverse is through a small sliding pinion through the secondary shaft. The final drive is by chain to a live rear axle.

JOHN WANAMAKER—At the last month Manager W. D. Gash secured space in the basement and shows a full line of Ford cars, for which this house is New York agent.

THOMAS B. JEFFERY & Co.—The Rambler line comprises eight models, two of which are substantially the same as the Rambler of last year. The other six models consist of two chassis, upon each of which are fitted three distinct styles of bodies. Both running gears are of substantially the same style of construction, the difference being that one has a single-cylinder motor while the other has a double-cylinder motor. Both are comparatively long, the single-cylinder car having a wheel base of 81 inches and the other a wheel base of 84 inches. The springs are longer and heavier than formerly and the axles are larger. The single-cylinder engine is larger and of higher compression than the engine used last year. The double-cylinder engine uses the same cylinders with a double crank case, the cylinders being cast separately and bolted to the case. Each cylinder is 5 by 6 inches and is rated at 7 brake horsepower. The carbureters are the same as last year. There is a carburetor for each cylinder on the large machine. The Rambler automatic ignition governor is retained. The ignition is by jump spark with two sets of dry cells. The mechanism is simple and conventional. The motor cooling system is of the well known Rambler thermo-siphon, but the combined tank and radiator has been placed in front and is somewhat on the honeycomb order, being comprised of a nest of 370 brass tubes soldered closely together between head plates. The transmission in each machine is of the planetary style as heretofore used. The gear for the two-cylinder car is much heavier, however. The rear axle is live and is driven by a single chain.



THE COMPOUND

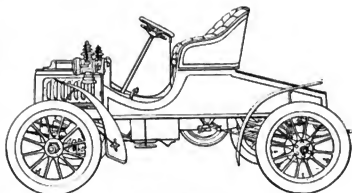


THE NORTHERN

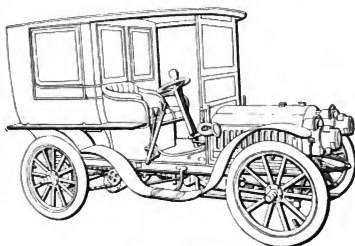


It rotates within a 2½-inch tube which supports the differential through a large yoke. There are two brakes, one on the transmission and the other on the rear wheel drums. The brakes this year are of the expanding pattern. Wheel steering has been added to all of the new models and upon the steering post is a skeleton wheel beneath the regular bend wheel. Tipping this regulates the throttle. The speed changes are obtained through a hand lever, while the transmission, brake and reverse are obtained by pedals. The body designs are typical. The single-cylinder model is fitted with a single seat body to which may be added a roomy tonneau or a delivery body. The double-cylinder chassis has a single seat body to which may be added a tonneau or a tonneau with canopy top and glass front.

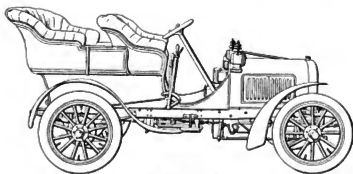
H. H. BUFFUM Co.—Two of the three models made by this company are on exhibition, the absent member being an eight-cylinder, opposed type racing car, rated at 80 horsepower. The model H is the four-cylinder car. The frame is of composite construction, each side having three parts, two of steel and the other of wood. The sides are made wide in section and taper at each end to form a truss, turning at the back to right angles and being riveted to steel cross angles with forged gooseneck spring hangers. The front ends are curved to take spring mounting lugs. The wheel base is 94½ inches, with semi-elliptical springs. The motor is 4½ by 5½ inches, the cylinders being separate on an aluminum base. The valves are mechanically operated, all being alike, and the two valve chambers on opposite sides. The valves are operated by two half-time cam shafts, located in separate compartments on either side of the case. Both jump and make and break ignition are fitted, being in no way connected other than as to control, which is by one lever from the seat. Both batteries and magnets are fitted. The governing device is located on the shaft which runs the magnets and is of the neccelerator type, working direct on the throttle. The



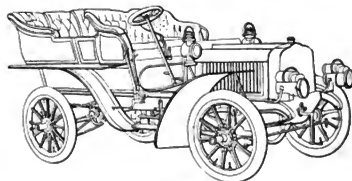
THE RAMBLER RUNABOUT



THE MOSS LIMOUSINE



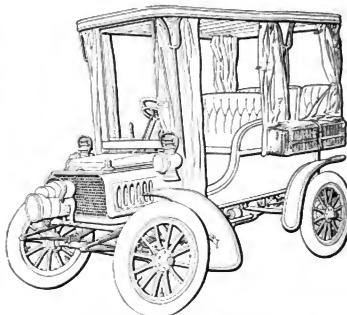
THE WALTER CAR



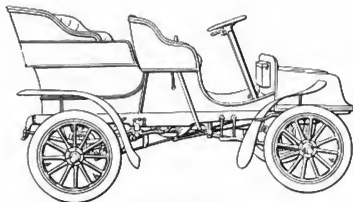
THE BUFFUM

transmission is of the sliding gear type, with three speeds forward and one reverse. The gear case has three parts, the center one being the spider, to which all the gears are attached, while the top and bottom are covers only and may be removed at will. The gear is operated by one lever, which locks the clutch out while the gears are being thrown and prevents the gears being operated until the clutch is released. The model E car has four cylinders of the opposed type, 3½ by 4½ inches, placed under the bonnet, the cylinders being longitudinally set. The bodies of the Buffum cars are of aluminum, being pressed in place instead of riveted. While nothing in the marine line was shown the company is making automobile boats and fitting the regular automobile motors therein.

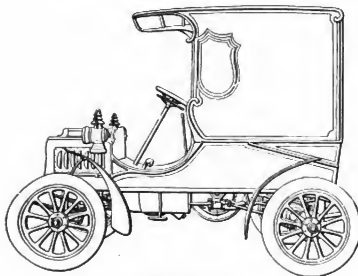
WALTER CAR Co.—The exhibitor shows one completed touring car, with tonneau, and one chassis. The touring car is of medium size, built on modern lines. The chassis is composed of pressed steel frame and braces, the motor and speed changing gear being carried on a supplementary frame suspended from the side reaches. The motor is of the four-cylinder vertical pattern, each cylinder being separate. The valves are located in the heads of the cylinders, each being mechanically operated. Two cam shafts are used, one on each side, both being enclosed in the crank case and oiled therefrom. The valves are operated by horizontal levers, pivoted in the center and supported by lugs projecting from the cylinders, the levers in turn being actuated by vertical rods, which are mounted directly beneath the outer ends of the horizontal levers. The vertical rods are operated by cams in the usual manner. The cylinders are 4½ by 9 inches. The power is stated to be 30 horsepower. The speed of the engine is controlled by the steering wheel and is governed by the lift of the intake valves; the cams are tapered, the variation being such as to allow of the valves being opened to the fullest extent or not at all. The cam shaft is movable, longitudinally with the engine, the movement being secured by a series of levers connected to the control lever at the base of the steering post. A cone friction clutch of usual pattern is used



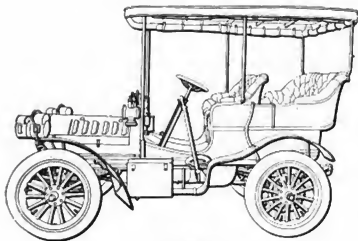
RAMBLER CANOPY TOP TOURING CAR



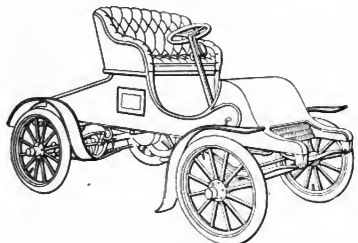
THE NEW CADILLAC



HAMPTON DELIVERY



THE HENSELEY

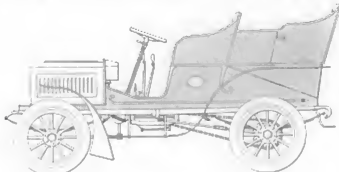


QUEEN HISPANIA

to connect the engine with the speed changing gear, the latter being provided with three speeds forward and one reverse. From the transmission gear shaft to the bevel gear shaft, the latter projecting from the casing around the differential gear on the rear axle, connection is made by a heavy steel spring spirally mounted around the ends of both shafts, but connected at each end so that as the transmission shaft revolves the spring relieves the sudden jar and transmits the power gradually to the rear axle. The spring is connected, at its rear end, to a coupling so made as to serve the purpose of a universal joint. A double set of brakes are provided.

COLUMBIUS MOTOR VEHICLE CO.—The Santos-Dumont of this show is about as different from that shown at the last show as one car would be from another in general principle of construction, for instead of being a light touring car driven by a double-cylinder horizontal motor under the body, it is a fairly large touring car propelled by a 20-horsepower four-cylinder, air-cooled motor placed across the front, under a square bonnet. The frame is of angle steel with 45-inch rear and 42-inch front springs. The motor cylinders are of 3½-inch bore and 4½-inch stroke. The ribs are cast on the cylinders and it is said that they all together provide 2,600 square inches of radiating surface. All valves are mechanically operated. The transmission is through spur gears with individual expanding clutches. The final drive is by roller chains. The brakes are of the expanding variety, a system which, incidentally, seems to be gaining considerable headway in the trade.

CADILLAC AUTOMOBILE CO.—In addition to model A, which is similar to the Cadillac of 1903, is a new and bigger car of the light touring car order. It has a pressed steel frame, semi-elliptical springs, 30-inch wheels, 74-inch wheel base, pressed steel front axle and three-spring suspension. It is driven by a single-cylinder, horizontal motor of 5-inch bore and stroke said to develop 8½ horsepower at 1,280 revolutions. It has copper water jacket attached without gaskets or

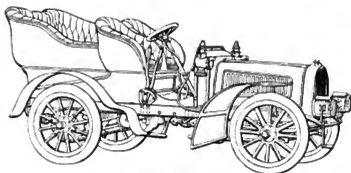


SANTOS-DUMONT

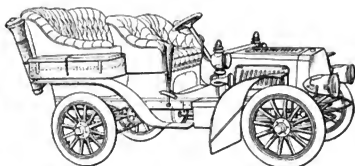
leaded joints. The valve chamber is separate from the cylinder. Both valves are mechanically operated and the inlet valve has a variable stroke by which the motor speed may be controlled. The same system of double plug ignition which was a feature of the last year car is used. The main shaft and crank pin bearings may be removed without removing the crank or connecting rod. The transmission is by an increased planetary system in which all parts revolve with the motor shaft on the high speed. Only one gear is attached to the motor shaft and no gear can run faster than it. A twenty-one tooth steel gear is the smallest gear in the set. The transmission can be entirely removed without removing the engine or crank shaft. The steering is by wheel with rack and pinion connections. There is an adjustment between the pinion and rack. No parts of the power plant, transmission or principal controlling mediums are attached to the body, all being self-contained on the running gear. The body can be removed by simply sliding it off backward. This machine is fitted out as a runabout, a tonneau, a surrey or a delivery wagon.

A. I. BLOMSTROM MOTOR CO.—The Queen is a runabout of the 1,200-pound class, driven by a 5½ by 6-inch single-cylinder motor, placed horizontally under the body. The transmission is through a two-speed forward and reverse planetary gear on the extension of the motor shaft. The general construction of the chassis is conventional. Either wood or wire wheels will be supplied, and if desired a two-cylinder motor consisting of two of the regular cylinders placed upon a special crank case will be substituted for the regular single-cylinder motor.

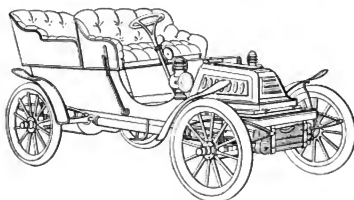
UPON MAPHINE CO.—In addition to the line of planetary gear transmissions shown by this company, a large touring car is also shown. The machine was hurriedly built in order to be on hand at the show, but for all that is a splendid specimen of work. The motor is rated at 24 horsepower, the four cylinders being 4 by 4½ inches vertical. An auxiliary shaft running longitudinally with the motor is



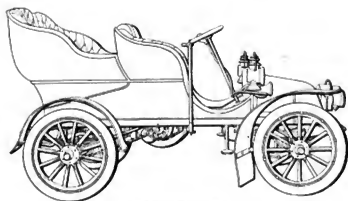
FOUR-CYLINDER POPE-TOLEDO



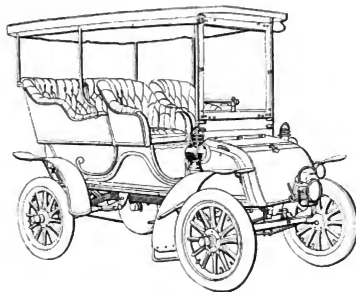
THE MATHESON



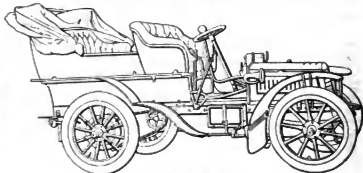
THE PHELPS



THE POPE-HARTFORD



TUDOR KNOX



ONE OF THE PANHARDS

shifted by means of a foot lever, this moving a beveled cam, which alters the throw of the inlet valve and thus controls the speed of the engine, which may also be controlled by means of the spark lead. The spark and mixture control levers are attached to the steering post. A very simple make and break ignition apparatus is used instead of jump spark, this having an arrangement whereby the movement of a lever from the seat makes it possible to cut out one or more cylinders. The drive is by double chain, the differential being on the secondary shaft. The frame is of 3-inch channel iron, and the springs of the semi-elliptical type. Another feature is that a separate exhaust pipe leads from each of the cylinders to a common but much larger pipe, which in turn leads into the muffler, the idea being to do away with the possibility of back pressure and at the same time to partially create a vacuum and tend to draw off the spent gases in the other exhaust pipes. The cooling system is a centrifugal pump and a Whitlock radiator. A large oiler on the dash may be operated by a force hand pump, but feeds by gravity otherwise. A feature is that the two large acetylene lights in front follow the direction of the wheels, thus throwing light always in the direction of the moving car. The rig weighs 2,600 pounds. The car is commodious, seating five people, is nicely finished and upholstered, has a Mercedes bonnet and 34 by 4½-inch tires.

POPE MFG. CO.—The Pope company shows for the first time the Pope-Tribune and Pope-Hartford cars, the former at \$650 and the latter at \$1,050 without tonneau and \$1,200 with tonneau, the former being made at Hagerstown and the latter at Hartford. The Tribune is an air-cooled machine but with a water-cooled head, and will attract attention. It has a single vertical cylinder under the bonnet, the dimensions being 4½ by 4½ inches, which is rated at 6 horsepower. The transmission is through a propeller shaft with universal joint. Wheel steer is used, and the speed change lever is located on the wheel mast to the left of the operator. The sliding gear gives two speeds forward and one reverse, the clutch being of the cone variety. The car has semi-elliptical springs and is painted a dark olive green. The Hartford has a 10-horsepower single cylinder, copper water jacketed motor, 5½ by 6 inches, the transmission being of the planetary type, with single chain drive. The water tank and a large space for storage are located under the bonnet, while the gasoline tank is under the seat. The speed change and spark levers are handy to the operator's right hand, supported by the seat. The brake, slow speed and reverse are operated by foot levers. The wheels are of wood, 30 by 3½ inches. The car on exhibition is painted red, with trimming of black. As the car is fitted the weight is 1,500 pounds. The frame is of angle iron.

POPE MOTOR CAR CO.—The four-cylinder Pope-Toledo is the feature of the exhibit. The frame is of channel steel with the side bars extending to form the spring hangers. The motor is vertical, with four individually mounted cylinders of 4½-inch bore and 5½-inch stroke. It is rated at 24-horsepower at 900 revolutions. The cylinders are copper jacketed. The inlet valves are of the atmospherically operated pattern, the company having some time ago experimented with mechanical valves,

and having dropped them as not being as efficient because of the greater compression space, or clearance, required by them. The sliding gear transmission is characterized by the device whereby the secondary shaft is automatically thrown out of engagement when the direct drive is applied, so that there will be absolutely no gears running, even though idle; it is also notable that the gears of the set are of No. 6 pitch and that the whole set is strong and solid. The radiator is of a modified honey-comb pattern and is shaped to correspond to a neatly curved readaptation of the Mercedes bonnet, which is used in connection with the steel hollowed dash with good effect. The other Pope Toledo shown is the 14 horsepower two-cylinder car. Prominent among the Pope Waverley electric cars is a physician's wagon, which is extraordinarily roomy for a single seat electric of the light class and which, if desired, will be fitted with Edison batteries.

**PANHARD & LEVASSOR**—Three and four-cylinder motors characterize the new Panhard. In these the cylinders are mounted separately upon the crank case. The three-cylinder motor is recommended because of its simplicity and uniform cadence. On the motors above 15 horsepower all inlet valves are automatically operated, and on all machines above 24 horsepower the cylinders may be of either cast iron or steel, the latter being the lighter construction. The ignition is by magneto. The carburation is by the well known Krebs carburetor. The model shown is a handsome tonneau with folding top for the rear seats.

**THE MATHESON MOTOR CAR CO.**—The Matheson is a four-cylinder touring car of 24-horsepower, seating seven passengers and weighing, complete, about 2,800 pounds. It is built with either a rear door tonneau or a side door surrey style rear seat. The body in either case is of aluminum. The frame is of combination wood and steel. The wheel base is 97 inches and the wheels are 36 inches in diameter. All wheels run on Timken roller bearings. The cylinder bore is  $4\frac{1}{2}$ -inches and the stroke 6 inches. All valves are mechanically operated. Either make and break or jump spark ignition is supplied. The carburetor is combined with a fuel pumping system which obviates the float. The transmission is by sliding gears, in which bronze gears mesh with steel gears. The final drive is by double side chains. There are two internal expanding brakes on the rear wheels and a brake on each end of the cross counter shaft. The control of the engine speed is by throttling

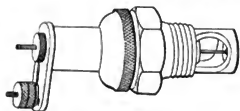
and there is a fly wheel governor which regulates the speed when the clutch is disengaged, to prevent racing. The car is built for rough as well as smooth road work, for beside being strong, has a clearance of 14 inches. It is furnished with a detachable tonneau and with a canopy top upon order.

**PHILIPS MOTOR VEHICLE CO.**—The Phelps is a light three-cylinder touring car. It has a wheel base of 84 inches. The 30-inch wood wheels, running on roller bearings, are equipped with 4-inch tires. All the springs are full elliptic. The three-cylinder upright motor is of  $4\frac{1}{2}$ -inch bore and stroke and is said to develop 15 horsepower. The ignition is by primary spark. The sliding gear transmission furnishes three forward speeds and is geared to 40 miles an hour on the direct drive at normal high engine speed. A feature of the final level gear drive is the tubular propeller shaft. The body is so made and attached that it may be tilted up as a whole to expose the entire mechanism.

**KNOX AUTOMOBILE CO.**—The full line of waterless Knox cars, prominent among the representatives of air-cooled motors by virtue of their peculiar system of cylinder radiation by pine instead of flanges, was recently described in *MOTOR AGE*. Of those not mentioned at that time, the show exhibit includes the two-cylinder Tudor touring car model with canopy top and glass front. It is only different from the other two-cylinder cars in body construction and equipment, the whole of the Knox line being built upon the basis of two running gears, one with a single and the other with a double-cylinder motor. In the body building of this Tudor model, however, the company has aimed to make it the waterless de luxe.

**ALEXANDER FISCHER**—This importer exhibited the chassis of a Rochet-Schneider in one stand and the Ariès in another. On the Rochet-Schneider the valve mechanism for the intakes is very similar to that of the Corliss type, and the change in the valve movement is made from the dash. The male member of the cone clutch is of the spider variety. The transmission is operated by one lever, and the drive is by double chain. The frame is of the combination type, with semi-elliptic springs. The cam shaft gears are combination fiber and brass, cleanly cut and of generous face. The cooling system consists of a cellular radiator, pump and fan, operated from the gear shaft. The fly-wheel and fan are made in one and the radiator is of the Cronvelle type.

## THE EXHIBITS OF PARTS AND SUNDRIES



THE SPITFIRE PLUG

**PARISH & BINGHAM CO.**—The general appearance of the metal wheel made by this company is the same as an ordinary wood artillery wheel, except that the spokes are smaller than the ordinary wood spoke. The butt of the spoke is keystone shaped on both sides, and each butt consists of two stampings welded together edgewise. The end of the spoke is threaded and is secured to the rim by a nipple. The standard twelve-spoke rim made by the Standard Welding Co. is used. The hub flanges are steel stampings. The wheels are furnished to order with any type of bearing and with any standard rim section.

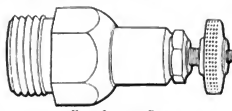
**DATYON ELECTRICAL MFG. CO.**—Apple dynamos for igniting purposes, primary and jump spark coils, spark plugs, dry cell and storage batteries, and King timers for single and multiple cylinder engines make up the line exhibited. The dynamo has been made smaller than last year's model, the voltage increased and the governors improved in detail, which assure more accurate governing of speed. Governors are now supplied for various styles of drive, such as chain, gear, friction and belt. The brush holder has been changed, the double set of brushes being replaced by a single large

combination brush on each side. The ignition outfit is put up in combination, which includes a dynamo with supporting frame, storage batteries, or dry cells, as preferred, and the spark coil, either primary or jump spark as preferred. The combinations are put up to suit all requirements, and with or without governor pulleys. The storage batteries consist of two cells and are used for starting purposes and storage cells for surplus current after the generator is thrown into use. The King timer has been made smaller than the one put out last season, the insulation being heavier around the terminals and the governor with a shorter degree of movement, it now being limited to 22 degrees.

**ARTHUR R. MOSLER**—The principal feature of the Spit-Fire spark plug, and the one which gives it this name, is the protecting chamber surrounding the sparking point. The gases becoming compressed in this chamber explode when the spark is produced and are projected, burning, into the combustion chamber of the engine. Thus it splits fire into the compressed charge in the cylinder and the combustion of the charge is about as instantaneous as is possible.

**VACUUM OIL CO.**—Samples of many grades of lubricating oils and grease are shown by this company, which is making a specialty of lubricants for automobile work, both steam and gasoline.

**HERZ & CO.**—The Omnibus spark plug shown is built on an entirely new principle. The mica insulation is wound and pressed around the central rod, and the whole core ground

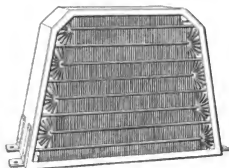


HERZ OMNIBUS PLUG

and tightened to the fitting by means of a cone from the inside of the air space. The insulation is built up out of pure Ural mica, and the claim is made that this air space prevents sooting and carbonizing. The Spark-rite spark plug is hand made, and is fitted by grinding into the cone of the fitting and then secured by a copper asbestos cone from the inside.

**MIDGLEY MFG. CO.**—Midgley tubular wheels are shown in the latest artillery patterns, and one especially is interesting, that fitted with a rim for the new Dunlop tire, to which form of rim the Midgley wheel is most easily adapted. Sections showing the built up formation of the spokes and rims are interesting on account of emphasizing both the clever stamping and the dip brazing employed in making the wheels.

**FAIRBANKS CO.**—The Goodson igniter exhibited is a magneto provided with a spring propelling device connected with a crank on the armature, whereby the armature is made to rotate within the magnetic field for a portion of a revolution at a speed which is entirely independent of the speed of the motor and which is sufficient to generate the current required to



BAISCOE RADIATOR

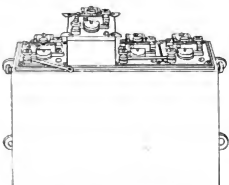
produce a spark. This igniter is so connected by belt or chain with the motor shaft that as the shaft turns it puts the spring impelling device under tension. It is so timed in its tripping action that at a certain point of the piston stroke the spring device is freed, and consequently gives the armature a quick turn, producing ultimately the spark in the cylinder.

**BAISCOE MFG. CO.**—Both tubular and honeycomb radiators are shown. The tubular radiators are made with any size tubing and with any style or shape of grill or fin. A spirally wrapped continuous fin is a recent addition, and the company will make its own tubing for the coming season. The honeycomb radiators are made of square tubes, set together on the diagonal, with a water space between them; the ends of the tubes being swelled to provide for this water space. The Capucine spiral ribbed radiator will be the leader the coming year. Other articles shown are steel fenders, hoods, tanks and bent tubes.

**HYATT ROLLER BEARING CO.**—The Hyatt roller bearing formed of rollers of ground steel spirals is shown assembled and as detached parts. Particular stress is laid upon the peculiar adaptability of the Hyatt bearing for the bearings of cross counter shafts in double chain drive cars.

**ELECTRIC STORAGE BATTERY CO.**—In the four-cell express type the cell has been especially designed to meet the requirements of the business vehicle. The jars are made stronger to resist the hard usage of such service and to reduce the breakage to a minimum. In the sparking cell the design has been materially changed in the terminals. These are rubber covered wires brought up from the element through a lead pipe. The wire terminals are long enough to come through the battery box on the car and are furnished with connectors, so that all connections are made away from the battery.

**PITTSFIELD SPARK COIL CO.**—Ignition matters claim the attention of this company, from Pittsfield, Mass., the exhibit being composed

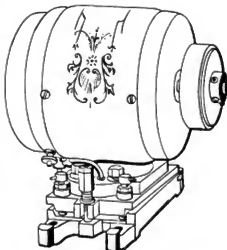


THE PITTSFIELD FOUR-CYLINDER COIL

of spark coils, plugs and dynamos for ignition purposes. The coils are of standard type and are made in sizes from that for motor cycles to the quadruple dash. The feature claimed for these coils is that in the multiple coils each coil is in a separate box. The igniter dynamo is arranged with a friction pulley and either with or without governor to regulate the output. The machine is in an iron case.

**HENDER MFG. CO.**—The Indian motor bicycle shown needs little description at this time, being substantially the same as the machine put out during 1903. The principal improvement consists in the grip control, whereby all of the operations in the control of the machine have been made without taking the hands from the handle bar. One peculiar advantage of the mechanism whereby this result is secured is that it may be fitted to any of the Indian motor bicycles now in use.

**DOW PORTABLE ELECTRIC CO.**—A comprehensive line of coils is exhibited, comprising all styles and all sizes. The high speed double point vibrator used last year has been retained on some models, while in others different types of high speed vibrators are fitted. It is noted that simplicity has been sought in each case.



THE PITTSFIELD IGNITER

where changes have been made. One such instance is a quad coil, on which one vibrator is used for all four coils, while another instance is where a non-vibrator coil is made to produce a series of sparks by means of an independent vibrator carried in a separate box and which is intended for dash use, while the quad coil may be carried where most convenient.

**N. Y. & N. J. LUBRICANT CO.**—The exhibitor shows a line of non-fluid oils and lubricant gums for use in forcing oil into recesses difficult to reach in any other manner. The oil will not drop or run, but is intended to be used in compression cups, the same as hard grease. The gums are made in gun metal, brass and bronze, are compact and may be carried in any tool case.

**BULLOCK-BERSFORD MFG. CO.**—The Bullock igniter is exhibited at the stand of the Dayton Electrical Mfg. Co. The igniter is made in the form of a plug, which can be inserted in any ordinary spark plug hole, yet gives a series of primary or make and break sparks each time the circuit is closed. No jump spark coil is used. An ordinary primary coil, of high resistance, is advocated in connection with eight cells of dry battery.

**ENGLISH & MERSICK CO.**—The principal part of this concern's exhibit is an automobile front



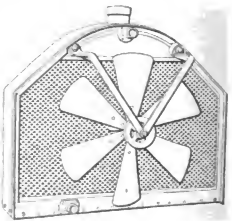
INDIAN GRIP CONTROL

window fixture, with heavy plate glass and polished brass trimmings. There are on this a number of small fastenings so arranged as to prevent rattling. The glass swings clear of the steering wheel and above the operator's head. The exhibit also includes a large variety of door locks, tonneau fastenings, handles, side lamps, horns, hinges, baskets and imitation cane work.

**AUTO SUPPLY CO.**—Being a manufacturer and jobber the exhibitor shows running gears, engines and differential gears, products of its factory, and jobbing lines covering many important parts and fittings, more especially axian carburetors, Hussey forgings, steering wheels, one piece forged axles and yokes, pumps, etc. In addition, the lines manufactured by Cowles & Co. are exhibited, these consisting of oil and acetylene lamps, brass locks and trimmings for automobiles. An arrangement has been made whereby the exhibitor will sell the product of Cowles & Co.

**NEWBURY & DUNHAM**—This is a firm doing business on the Harlem river and handling the machinery product of the Western Gas Engine Co., which has a line of two-cycle marine motors, and the White four-cycle motor for marine purposes, the exhibit consisting of a single cylinder 3-horsepower, double cylinder 5 and 7-horsepower and a four-cylinder 20-horsepower, the 5-horsepower motor having a sight gasoline feed.

**WHITLOCK COIL PIPE CO.**—The exhibit is devoted principally to the Whitlock cellular cooler, although a line of disc radiators and bent tubing is shown. The Whitlock cellular cooler consists of a series of transversely corrugated tubes extending between a top and bottom water tank. The corrugations of every tube are reversed with relation to the two tubes adjacent on either side, thus forming air cells running from front to back. One of the principal improvements is the formation



WHITLOCK RADIATOR

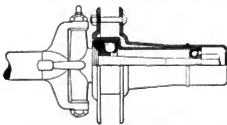
of thousands of little points projecting into the air cells to increase the amount of surface. These points are made by drawing out the metal into minute cups, each of which is full of water, separated from the air only by a thin wall of copper. The cooler is made in two general styles.

C. J. IVEN—This exhibit comprises a very complete line of parts, including Briscoe radiators, tanks, fans, hoods, and a combined tank, radiator and fan in which the latter is almost invisible; the Wheeler Mfg. Co.'s line of brass trimmings and do-a-dos seats; Loomis mufflers, circulating pumps, lights and transmissions; Russell induction coils, and Standard Carriage Lamp Co.'s lamps, brackets and generators.

GENERAL ELECTRIC CO.—As a manufacturer of electrical equipments, all kinds of switches, circuit breakers, sockets, ammeters and volt meters, dynamos and motors are exhibited. The principal feature of the exhibit is an outfit for charging storage batteries, such as is required in charging stations, garages, etc.

THE JESSEY BRAKE CO.—The exhibit is composed of Searls Jaks, Nos. 6, 8 and 9 being shown. The latter is new in design, it having a more substantial base than the Nos. 6 and 8. All parts have been made heavier in the standard sizes.

AMERICAN BALL BEARING CO.—The company shows the adaptation of ball bearings to ball especially, but does not neglect transmission and other bearings of the power plant of a car. One of the typical wheel hubs shown is drawn



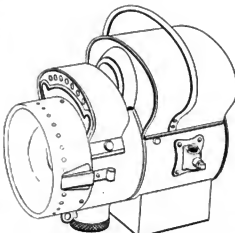
AMERICAN BALL BEARING HUB

from sheet steel, having a smooth finish inside and out. As a front hub, the most notable feature of design is the placing of the center line of the spokes as close to the steering head as possible to render steering easy. The ball races are ground after they are in position in the hub shell and the cones in the cone seat on the spindle are ground to gauge.

MORGAN & WRIGHT—The clincher tire being introduced by this company has a special fabric construction which, it is claimed, obviates the rigid, unyielding feature which is the natural result of multiplying fabric layers. By giving an elasticity to the fabric as nearly proportionate to that of the rubber covering as is possible, separation between the fabric and cover is avoided. Belts are not necessary on these tires on sizes up to 34½ inches.

POPE MFG. CO.—In a separate space, the exhibitor displays three motor cycles, the Columbia, Rambler and Tribune. All the machines are fitted with the Thor motor and parts, although the assembling of the accessories is carried out on different lines on each machine. These differences consist chiefly in the placing of the coils, batteries, carburetors, etc.

AMERICAN COIL CO.—The Acme spark plug made by this company has a sheet of pure mica wrapped around the central electrode in the form of a tube. The electrode with its mica casing is then forced into the central



THE COLUMBIA GAS LAMP

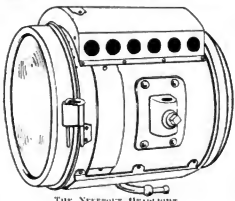
orifice of the porcelain insulation. By this construction the mica wrapping is claimed to act as a perfect insulator, even after the porcelain insulation has become cracked. The American Little Wonder dynamo exhibited has a system of storage in the base which does away with the use of extra batteries for starting. The machine is fitted with four brushes, which insure a good brush contact at all times.

HINE-WATT MFG. CO.—The Columbia automatic gas lamp is peculiar by its gas valve which turns on and off the supply to the burner instantly and which, through this control of back pressure, is self-regulating so far as the flow of water is concerned. The patterns range from small cycle lamps to large typical headlights.

TIMKEN ROLLER BEARING AXLE CO.—The display shows a divided rear live axle and solid rear live axle with compensating gears, steering knuckles, bearings and hubs; bearings and cups for bevel gear drive; axles and wooden auxiliary wheels with channel rims. The principal theory of the Timken bearings is the employment of tapered rolls operating and running on cones having two ridges which engage the rolls and take up the lateral or end strain. Owing to their taper, the wear at any time can be taken up.

R. F. GOODRICH CO.—The Goodrich detachable tire, which is the company's leader, so far as automobile tires go, is about the same as last year, being a well made form of popular clincher tire. Internal and side wire solid tires are also shown.

ROSE MFG. CO.—A full line of Neveront acetylene motor lamps and oil side and tail lamps is shown. The Neveront headlights for automobiles all contain the Neveront hydro-pneumatic safety system of gas generation, which allows the light to be turned on instantly



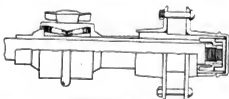
THE NEVERONT HEADLIGHT

and repeatedly and extinguished immediately by the operator. The whole system is controlled by one gas cock, which stops the flow of gas and water simultaneously. The search lights are made in three sizes, of highly polished brass with copper front and back, lens mirror reflector and adjustable focus.

QUIMBY & CO.—The exhibit consists of a 24-horsepower Packard chassis, fitted with an aluminum body, and tonneau for four people, with canopy top, drop glass front and rounded, portable glass back. The tonneau has individual seats for four passengers and is provided with two extra back rests, which allow the passengers occupying the front seats in the tonneau to face forward. The body is upholstered with black leather, tufted and is finished in pearl grey.

HOK TIRE CO.—A number of samples of this company's tires are shown, the chief feature of the tire being the sponge rubber center, which is claimed to give the effect of the pneumatic and still avoids the possibility of puncture.

PIONEER AUTOMOBILE & CAMPUS MOTOR CO.—A double cylinder vertical two-cycle motor, without crank case and base compression, and with the shaft and fly wheel on the top of the motor, is displayed by this house. The cylinders are 4 by 4 inch, of common pattern, but minus a base, being hung directly to a special frame. Below the frame are guides for the connecting rod ends, to which are attached rigidly and turned inwardly auxiliary cranks. To these are attached outside connecting rods running upward and above the top of the cylinders on the up stroke. The crank shaft is arranged longitudinally on the top of the



TIMKEN ROLLER BEARING

cylinders, with a bearing on each, the cranks, set at 180 degrees, being between the two cylinders. The fly wheel is located between the cranks. Thus all the parts are exposed except the pistons themselves. The carburetor is between the cylinders, the intake pipe branching to each cylinder, as also does the exhaust pipe. Atmospheric pressure is depended upon to charge the cylinders. The intake and exhaust ports are located on one side of the cylinder on the same face, and the commutator is operated direct from the crank shaft extension.

STANDARD WELDING CO.—The exhibit consists of seamless steel rims, clincher and single tube, seamless steel tubing, and all kinds of various forms of electrically welded articles. The seamless steel rims are of the standard pattern, G & J type.

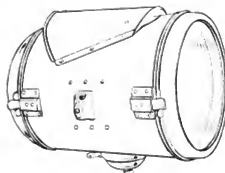
INDUCTION COIL CO.—The exhibit of the Milwaukee house is made in the stand of the Detroit Motor Works. All 1904 coils for dash use are put up in mahogany cases. Instead of the usual corner clips, for mounting on the dash, long metallic strips are used, running across the backs and projecting beyond the sides of the cases sufficiently to allow the use of bolts for fastening. The lids are hinged on the front of the boxes, which allows the same to be opened toward the rear of the car, although attached to the dash. New vibrators of three



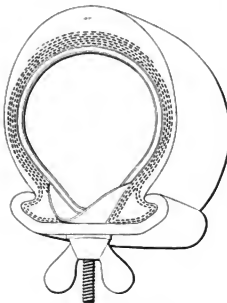
NEW DUNLOP TIRE



CHAMPION PLANETARY GEAR



RICHMOND RACING LAMP



GOODYEAR CLINCHER TIRE

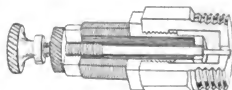
types are shown. One consists of a double spring, rigidly attached by means of which high speed vibrations are secured; another is made with the regular single spring, with half spring mounted over it. This is called the medium speed vibrator. The third type has a double bridge, with two means of adjustment, and affords various speeds, according to regulation.

**HARTFORD RUBBER WORKS CO.**—Single tube detachable and clincher automobile tires, solid rubber tires and a line of automobile mats are shown. In the improved Dunlop tire the rim consists of a hollow ring flattened at the point of contact with the wood felloe of the wheel, slightly concaved at the tire seat to form a cup in which the inner tube will round out naturally under pressure. It is also concaved at each edge for the receipt of tubular elliptical side flanges which are rendered removable by means of a turnbuckle provided with right and left threads. The Hartford clincher tire shown is built under the G & J patent, but follows the foreign style and construction closely.

**RICHMOND MFG. CO.**—Something of a novelty in the line of gas generators for acetylene lamps is put out by this house. The generator is so made that it is not necessary to remove the carbide from the original package to fill the lamp, a 2-pound can being put into the generator and a screw turned, which in turn breaks the can, much the way as is done in a fire extinguisher. In addition but one screw is used to regulate the water and gas supply, and this screw down extinguishes the light immediately. Inside the brass outer wall is a lining of asbestos and this is held in place on the inside by heavy tin lining.

**GOODYEAR TIRE & RUBBER CO.**—Patches form one part of this interesting exhibit. These patches are of various sizes for repairing inner tubes of clincher and detachable tires. Each patch has the name of the company and the number of the patch. Eleven sizes are made. A novelty is a water proof inner tube bag, which protects the inner tube from wear and tear, grease and water. A sample board shows the different styles and sizes of tires manufactured. The latest product is the Michelin construction of clincher tire. This tire is round in section instead of being elliptical.

**CHAMPION MFG. CO.**—Different size planetary speed change gears are shown, for light runabouts, medium weight wagons and heavy wagons and trucks. All the gears are spur gears cut from the solid piece, and all parts are in-



THE NEVERKIP SPARK PLUG

ter-changeable. The wearing parts are broom-bushed.

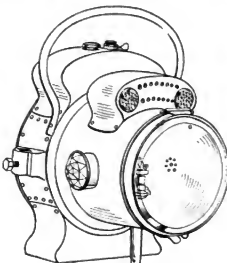
**POST & LESTER CO.**—The Neverkip spark plug is the new candidate for public favor offered by this company. The spark in this plug jumps from the point of the wire to the nearest edge of the metal surrounding it. The hole in the protecting cap, through which the wire is brought up flush, is considerably larger than the wire, thus leaving the space necessary for the spark to jump; yet it is small enough to prevent the flames of combustion in the cylinder from passing back into the chamber and depositing carbon on the insulating parts. The plug is supplied in various threads.

**20TH CENTURY MFG. CO.**—The large burning acetylene gas headlight is the leading attraction at this exhibit. The internal construction is very simple and easily understood. Large oil lamps for headlights and side lights are also shown. The Grand and Mammoth oil kerosene lamps are specialties. The company also has a line of horns and one or two brass mud-dries.

**AMERICAN MOTOR CO.**—The Marsh motor cycle is exhibited by this company, which recently purchased the stock of the Motor Cycle Mfg. Co., which failed some time ago. The new machine has been improved by the addition of an automatic oiling device for the engine, head fittings being made heavier, quadruple forks of heavier construction than formerly, new method of balancing the engine, which has recently been patented, 2-inch single tube or detachable tires, as preferred, and a regulator for air at the inlet into the carburetor. An extra spring vent attachment is also exhibited, being so constructed as to be mounted over the rear wheel.

**SALISBURY WHEEL & MFG. CO.**—The Salisbury is a wood wheel peculiar in the hub end fastening of the spokes. Each hub flange has radial ribs of V section and each corner of each spoke is slightly chamfered to correspond. Thus when the wheel is assembled the ribs project slightly between the spokes without separating them. The flanges are dished so that when drawn together the spokes are locked in place by pressure on all four sides and of such directions of application that withdrawing tendency is directly combated.

**DETROIT MOTOR WORKS.**—An exhibit of the Sta-Rite spark plug, auto-jack, auto-click and auto-stick. Spark plugs are shown in twelve styles for different types of cars and engines. These include three 1/2-inch of different shapes of plugs, one style each, for Winton, Peerless, Autocar, Locomobile, Knox, Thomas and other cars. The metric thread is furnished as a standard, in two styles, as are 3/4-inch plugs, with extra long shells for use especially in heavily jacketed cylinders or heads. The plugs are improved, particularly at the top end of the inside porcelain, a steel spring tension washer being used at that point the same as at top of the porcelain cap, to take care of the expansion between the porcelain and the inside electrode. The Sta-Rite auto-jack is made of



THE 20TH CENTURY HEADLIGHT





THE SEABRITE SPARK PLUG

malleable iron, has spiral gear and ratchet combination. The auto click is a small pocket device, by means of which the condition of a set of batteries may be determined. The instrument makes a clicking sound if the batteries provide a current of more than three amperes. The auto-stick is a device made in three sections, folded up when not needed and carried in a leather case, by means of which the quantity of gasoline in any standard car can be determined.

COLUMBIA LUBRICANTS CO. OF NEW YORK—Monogram oils and greases comprise this display. For the convenience of automobile users the goods are put up in small packages and consists of light and heavy gas engine oil, automobile machine oil, motor and graphite gear grease.

BARTON BOILER CO.—Several improvements have been made in the Barton burner, chief of which is the addition of a safety valve thermostat. Besides this, a new kerosene burner is being introduced. In the 1904 boiler the tubes have been increased in diameter from  $\frac{1}{4}$  inch to  $\frac{3}{4}$  inch, thereby giving a greater heating surface and permitting of a larger capacity. A level gear which is attached to the valve on the main burner does away with any possibility of the valve opening through vibration and thus altering the heat under the boiler. A new condenser is also among the things exhibited.

ROCHESTER STEAM MOTOR WORKS—Little change has been deemed necessary in this product by the maker, but the parts have now been so made that they are all in line, giving better valve action and a positive and quick cut-off.

CASE MFG. CO.—At the last moment this concern secured space and has on exhibition a new steering wheel, axles and differentials. The axles are made heavy and the keyway is dispensed with through means of a square end engaging a square hole. The two halves of the axle are interchangeable, so that a mistake in ordering a part will have no effect should the order be ambiguous. The axle is made for level gear drive.

A. H. FUNKE—A device for storing acetylene gas is shown, which obviates the use of a generator with automobile lamps. The salient features are, the use of porous brick or asbestos with which the tanks are filled, and the use of acetone in combination with acetylene, the effect of which is to greatly increase the capacity of the tank under a given pressure. In the future, all the Funke separate generator lamps will be designed for use either with this tank or the separate generator, so that no different requisitions for lamps will be necessary when this equipment is used.

CONTINENTAL CAOUTCHOUC CO.—The principal novelty of the Continental display is a flat thread tire for rear wheels to prevent skidding. A complete line of Continental tires from 2 $\frac{1}{2}$  to 5 inches is shown; also tire sandries, consisting of pouches, repair outfits, landings, plasters and other small articles.

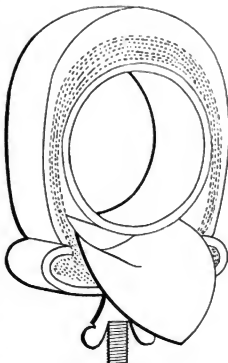
THE GRAHAM CO.—Anticipating the overhauling of cars on rough roads, the Graham Co. is marketing a series-multiple buffer which may

be attached to any ordinary car in place of ordinary springs. Inside of a large spiral spring is a case which contains a smaller spring, and inside this is a still smaller case which contains another spring. The smallest spring is designed to take the load of the empty car or with one passenger, the middle spring will carry a full load, including fuel and water, while the outside or largest spring acts only when the car is receiving an excessive jolt when striking a deep, sharp hole or an obstruction. In addition the company shows a supplementary spiral spring which may be attached to any spring car as a safeguard against broken springs.

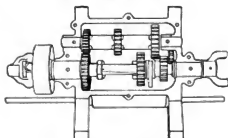
CHARLES E. MILLER—Being a jobber of motor car parts, appliances and sundries, the exhibitor shows selections from a great line of such products. Many of these are of standard character, some of the firms represented being also individually represented. One of the interesting features of the display is the three-speed and reverse sliding gear transmission made by the Locke Regulator Co., which until recently was chiefly interested in the production of parts for steam cars, but which has now taken up the manufacture of gasoline car factors. The gear is of the usual pattern with the sliding gears on the main shaft, which may be coupled with the clutch section of the motor shaft to furnish direct drive on the high speed.

O. K. MACHINE WORKS—A sliding gear transmission is shown, having three speeds forward and a reverse. The speed ratio is three to one on the high speed, six to one on the intermediate, twelve to one on the low, and eighteen to one on the reverse. The motor is coupled to a shaft which projects out of the front end of the transmission case. The company also makes a smaller and lighter gear for use with motors up to 10 horsepower and a larger gear suitable for cars having motors of from 20 to 40 horsepower. The 20-horsepower size weighs 108 pounds and has an aluminum case.

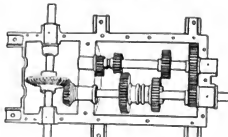
MICHELIN TIRE CO.—This well known French tire concern occupies a large space in the basement, where all sizes of tires are shown, as well as a couple of motor cycles with Clement motors, which are placed in the fore part of the frame at an angle. The machines are belt driven and have double front forks. The motor is rated at 1 $\frac{1}{2}$  horsepower, has the controlling levers near at hand on the top bar



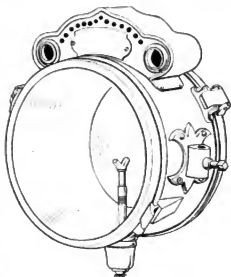
THE CONTINENTAL TIRE



LOCKE TRANSMISSION GEAR



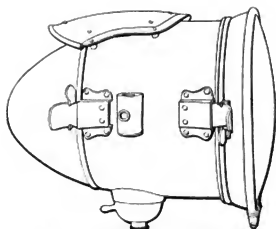
THE O. K. TRANSMISSION



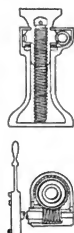
ONE OF FUNKE'S ACETYLENES



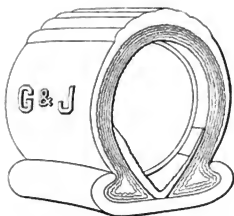
THE MICHELIN TIRE.



GRAY &amp; DAVIS BILLET LENS REFLECTOR



UNIVERSAL JACK



G &amp; J CLINCHER TIRE

while the gasoline tank is back of the seat. So far as the Michelin tires are concerned, there has been no change made over the tire of last year that is worth mentioning.

**GRAY & DAVIS**—A variety of styles of acetylene and oil lamps are shown. The gas headlight with lens mirror searchlight reflector is the leader. Oil side and tail lamps, generators and parts are also exhibited.

**LIGHT MFG. & FOUNDRY CO.**—The automobile brand of aluminum castings made by this company are of a special alloy for which is claimed a tensile strength of 33,000 pounds, making it very tough and capable of hobbling threads as well as the heavier metals. Many parts of engines and transmissions are now made of this alloy.

**UNIVERSAL JACK & POWER CO.**—One advantage claimed for this jack is that only one man is required to operate any size. It will elevate a load to a small part of an inch, and when elevated the load can be supported for any length of time. The jack is ball bearing. Another feature is a device for moving the jack with its load, when elevated any distance, by the same power with which it is elevated.

**E. J. WILLIS CO.**—The Yankee searchlight, made by this company, is a principal feature of the exhibit. The lamp is designed to fasten on the dashboard by a swivel bracket hinged on the side of the lamp; the bracket is also pivoted at the bottom so the lamp can be turned at any angle. Yankee mica spark plugs, wire terminals, lamps and horns, of which the parts are imported in the rough and assembled at the factory in New York, are also shown. The company is making a number of new specialties

for manufacturers, jobbers and dealers at the factory.

**G & J TIRE CO.**—The distinguishing feature of the G & J tire aside from its well known clincher construction, has always been the corrugated tread. The object of this is to overcome skidding on slippery roadways. The tires are also supplied with smooth tread if desired. Tires for automobiles, motor cycles, bicycles and carriages are shown.

**EMIL GROSSMAN**—This exhibit of automobile accessories shows a line of lamps, horns, spark plugs, jacks, etc. The lamps shown are the Duellier headlights, generators and oil lamps; Continental headlights and generators, Alpha rear lamps and all kinds of lamp parts and sundries. Over forty styles of horns are shown.

**WHEELLOCK MOTOR CAR CLOCK CO.**—A small clock, encased in brass, and arranged to attach to the dash is shown. The front part of the brass case is detachable so that the clock may be removed to be wound.

**VEEDER MFG. CO.**—The Veeder odometer, while built for high-speed touring cars, may be applied to lighter vehicles. Special attaching fixtures to suit any peculiar axle construction are furnished at cost. Cyclometers, counting devices and tachometers are also shown.

**FIRESTONE TIRE & RUBBER CO.**—This display shows the Firestone side-wire solid tires. In the way of novelties there are on exhibition wheels with tires that have run 14,000 miles without repair. In the construction of the Firestone tire the rubber is molded in circular molds, in either endless or butt end form. Steel cross bars are inserted laterally near the inner edge

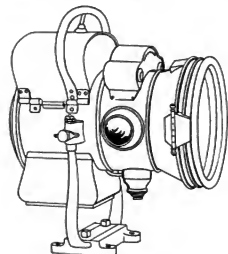
at regular intervals, and the tire is then vulcanized to the proper density to easily carry the weight for which it is intended.

**RUSHMORE DYNAMO WORKS**—The Rushmore people exhibit an immense searchlight designed for use on a ship and one of similar pattern but designed for use on a small car. The feature of the company's goods shown is that the carbide is contained in a wire basket, which enables all of the carbide to be consumed, the ash after consumption dropping down through the screen into the bottom of the generator.

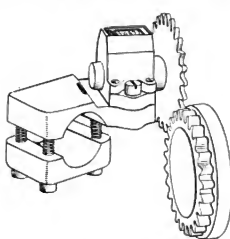
**FAWKES RUBBER CO.**—The Fawkes tire is called indestructible and airless, and in addition to a line of new samples there are shown several tires that have seen service. The tire is made with sections, has a heavy fabric and on the side next the rim is an aperture the entire length of the tire, which is depended upon to give resiliency.

**SAKS & CO.**—In one of the big Deauville cars in the restaurant section this automobile clothing house has four lifelike figures dressed to show the latest thing in automobile clothing.

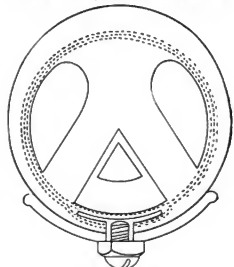
**MODERN MFG. CO.**—Exhibit consists of a pair of mounted wheels, which are used for operating the dashboard odometer made by the company. The instrument registers mileage of each trip as well as keeping total record of season's mileage. The trip dial registers to 1,000 miles. The total record registers to 100,000 miles. Either dial may be set back to zero at will. They are made for 28, 30, 32, 34 and 36 inch wheels. A dash clock and holder are also exhibited, the clock being furnished with one extra hand which may be set at what ever time a



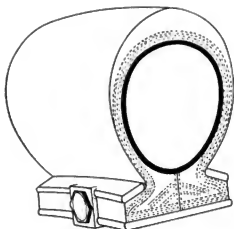
YANKEE HEADLIGHT



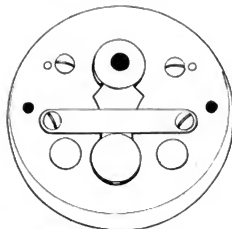
VEEDER ODOMETER



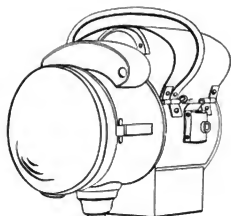
THE FAWKES TIRE



THE FISK TIRE



SPLITDORF TWO-WAY SWITCH



SOLAR HEADLIGHT

trip is begun, thus always showing the time the start was made.

**FISK RUBBER CO.**—The Fisk detachable tire, new a year ago, well known now, is displayed in the usual sizes. The Fisk tire is mechanically fastened on a flat rim by means of annular flanged rings held to the rim sides and drawn toward each other by cross bolts, thus clamping the flanged base of the tire casing positively in position. The inflation of the tire has nothing to do with its attachment to the rim.

**CRAMP & SON SHIP & ENGINE BUILDING CO.**—The exhibit comprises samples of manganese bronze castings for such purposes as gears, motor crank cases and transmission gear cases and sprockets. The company is old in this line of manufacture.

**STANDARD TIRE CO.**—Four tires are exhibited, two being of the detachable type and two of the single tube variety. These tires are claimed to be strictly puncture proof owing to the vulcanizing of the fabric, that process making the fabric and the material with which it is coated sufficiently tough to resist the passage through it of nails, etc.

**WHALEBONE RUBBER CO.**—The trade mark of this company—whalebone rubber—is held to indicate that the rubber in the tires is as tough as whalebone. The fabric and rubber are said to be inseparable. The tires are guaranteed puncture-proof under reasonable conditions, provided they are not subjected to excessive abuse or neglect. Whalebone automobile tires are equipped with chaffing strips, consisting of a heavy layer of fabric applied to the rim side of the tire where it comes in contact with the edges of the rims.

**C. F. SPLITDORF**—A line of standard box and

dash coils for single and multiple types for one or more cylinder engines, comprises this exhibit. The latter models are fitted with new hammer type vibrators, which break the circuit with rapidity. The vibrators are of the high speed type and sensitive. The ends of the vibrators, which are located over the core ends, are copper plated. Double adjustments are used, a separate lock being provided for each. A new departure is shown in a double pole switch and cut-out plug being fastened to the front of the coil box and made a part thereof. As all connections are made inside the box, the construction simplifies the wiring of a car, allows of the space ordinarily used for the switch being used for other purposes. Spark plugs of the same general style as made heretofore are exhibited, as are coils without vibrators. The attraction at the stand is a large coil, the spark generated being 22 inches between terminals.

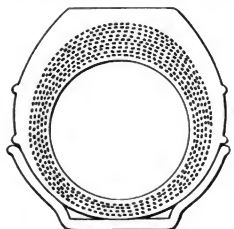
**WHEELER MFG. CO.**—Side hampers, rear deck hampers, umbrella baskets, a line of brass trimmings and door-dos seats from the automobile sundry department of this company make up this display. It was the intention of the company to exhibit automobiles, but they could not get to gether ready in time.

**IMPERIAL WHEEL CO.**—The Imperial artillery wheel for automobiles is a combination of the Sarven principle of wood hub, miter and tenon of spokes, with suitable flanges for strength and to receive the bearings without in any way weakening the wood hub, but supporting and strengthening it. The spokes are glued on tenons and miters and driven into the hub. The flanges are recessed on their inner centers to receive the ends of the hubs, the outer centers being fitted to receive the bearings.

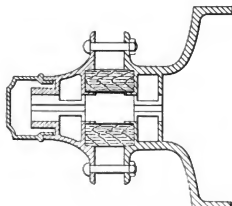
**BADGER BRASS MFG. CO.**—The Solar lamp line shows a number of improvements. In the new lamps offered the Junior oil side lamp for automobiles is made entirely of brass, copper riveted throughout. It has a 1-inch red rear signal and an aluminum reflector. The Standard motor acetylene lamp has a new carbide fount fitted with a false bottom and rolled thread. The company is also showing generator lamps similar in construction to the flame hood of the Phare Solars. The Phare de Luxe is a self-contained generator lamp similar to the Phare Solar, except that it is fitted with lens mirror reflector. The flame chamber has aluminum lining, as well as the door and body.

**COLE & WOOD**—Show one aluminum tonneau body, partially finished. The remaining work will be done during the show in order to demonstrate to the public, the class of work done by the concern. The metal is hammered by hand to the desired shape, then braided.

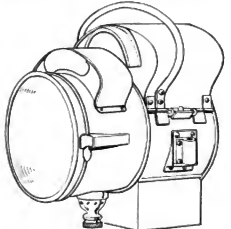
**ATWOOD MFG. CO.**—A complete line of Stay-lit oil and acetylene lamps, of various sizes, the latter type being entirely new this season, is shown. Changes in the oil lamps consist chiefly in the fluted reflectors in the No. 1 model, and heavy plate glass covering for all reflectors. The No. 3 has lens with colored section across the top, red in one and green in the opposite side. The tail lamp is a new production; is fitted with red lens in front, and has white lens of smaller size for throwing the light on steps or numbers carried on the rear of vehicles. A smaller size of tail lamp is also shown, made much on the same principle as the large one. Acetylene headlights are shown in four styles, the No. 6 and No. 5 being of the self-contained pattern, while the No. 4 and No. 7 are made with ir-



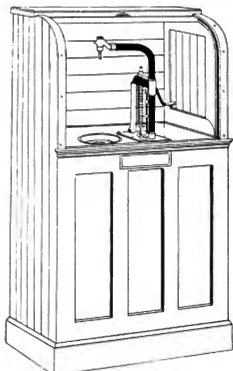
WHALEBONE TIRE



AN IMPERIAL WHEEL



ATWOOD HEADLIGHT



BOWSER GASOLINE CABINET

dependent generators. A new headlight, of the independent generator type, is shown, the shape following the lines of a cartridge or bullet. A full line of brackets, for all styles of lamps, made by the company, is shown.

S. F. BOWSER & Co.—This firm shows two cabinet lubricating oil tanks, one with open top and the other with roll top, which may be locked. The tanks are designed for garage, factory and individual use and are made in sizes to suit requirements. They are so adjustable they may be set to draw at one operation of the handle any desired quantity of oil, the holding capacity ranging from 1 to 5 barrels. In addition the Bowser gasoline tank and pump, the former to be under ground, are exhibited. This type of tank is also made in a variety of sizes and styles.

PORK MFG. Co.—The exhibit comprises a complete line of necessities, such as French horns, with and without flexible tubing, electric pocket lamps, pumps, and oil syringes. Horns of extremely large sizes are shown.

T. J. WETZEL.—The Baldwin chain, which is exhibited here, is somewhat simplified for this



THE BALDWIN CHAIN

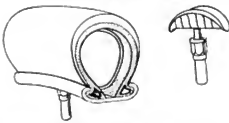
season, being now made in two rather than four parts. Instead of the pin being removed from the links at one end, the chain is so made that the two pins are respectively riveted to the two links. In joining, the ends of the pins are passed through the large holes in the center of the links and are then drawn into the slot cut from the center hole in either direction toward the end. This brings the free ends of the pins obliquely opposite. In addition Mr. Wetzel shows the brass spider and laminated wood handle steering wheels made by the Centaur Motor Co., steel frames and steel wheels made by Parish & Bingham, and a new tilting steering wheel.

CORLESS & Co.—Exhibit two wheels fitted with heavy, wide tires. They are intended especially for heavy traffic vehicles. The construction is such as to make a substantial and durable tire.

DIAMOND RUBBER Co.—A departure in construction most noticeable in the Diamond detachable or clincher tire is the use of a rubber-covered lug in place of the customary



THE CENTAUR STEERING WHEEL



DIAMOND 'CLINCHER' TIRE

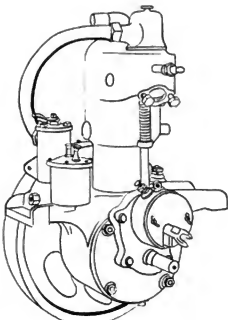
leather-covered article. For this the claim is made that chafing is prevented and tire is made waterproof. The lug is fastened by a wrench. The use of a loose washer on the lug is done away with by the presence of a swivel washer attached to the nut. A pair of tires from Old Pacific is exhibited. The single tube automobile tires show a general addition of strength at every point.

BROWN-LIFE GEAR Co.—Aside from the nine models of equalizing gears for chain or bevel drive, known well on account of being first of the spur gear pattern, two sizes of the company's back lock steering gear are shown. This device operates by a double worm and a gear and is provided with take-up for wear.

FEDERAL MFG. Co.—Here is a large number and variety of special parts, such as rear axles, front axles and frames, made to customers' specifications, the object being to show that the automobile industry wishes to avoid an excessive plant investment. The standard



FEDERAL PRESSED STEEL FRAME

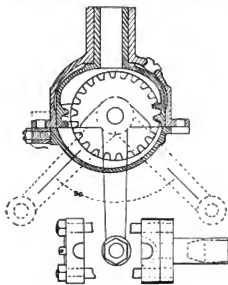


THE HOLLEY MOTOR

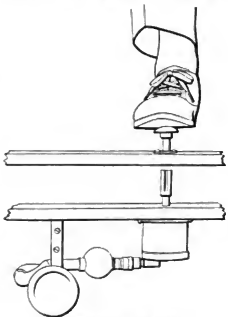
line of parts does not seem to be complete except for electric vehicles. The variety and workmanship of the pressed steel frame parts appear to substantiate the claims of the company for the thoroughness of its preliminary experiments in this branch of activity. A display of light and heavy standard parts, the Diamond automobile chains and high duty steel balls complete the exhibit. There was also shown a complete line of new parts for heavy trucks, such as hangers for motors, distance rods, brakes of several patterns, and such articles as are not made especially by wagon makers proper.

CENTAUR MOTOR Co.—In the automobile steering wheels of this company the rim is built up from three plies of selected rock maple, each having a varying direction of grain in order to insure a rigid construction and a true circle. The arms of the web are engaged by the use of heavy-gauge brass screws. The cap nut is of polished brass and serves as a lock nut.

GLEASON-PETERS AIR PUMP Co.—There is apparently an endless number of styles and sizes of pumps in this display. One novelty is a



THE BROWN-LIFE STEERING GEAR



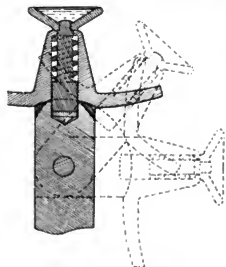
GLEASON-PETERS FOOT HORN

foot horn which may be fastened underneath the body of the vehicle. This horn overcomes the necessity of taking the hand off the steering gear to blow the horn. The pump is attached by rubber tubing. The whole apparatus weighs only 2 pounds. Another device is an oiler made of heavy brass tubing with cork washer on the end of the plunger rod. The joint is seamless.

**WHITNEY MFG. CO.**—This company shows a line of automobile, bicycle and motor cycle chains for main drive, circulating pumps, cooling fans, starting devices, etc., and also samples of keys and key seat cutters illustrating the Woodruff patent system of keying.

**VARIABLE DUPLEX MAGNET CO.**—This exhibitor shows, for the first time, a line of Jumpflame coils. The cases are shown finished in oak and white; the vibrators are assorted in variety and construction. Coils for all classes of work are made. The secondary coils are carried in porcelain casings, while glass tubes are used between the primary and secondary windings to insure good insulation. Some coils are fitted with two condensers.

**WARNER DIFFERENTIAL GEAR CO.**—The feature of the steering wheel made by this company is that it tilts two ways, which makes it twice as convenient as a single tilting wheel. It is said that when tilted it will not rattle



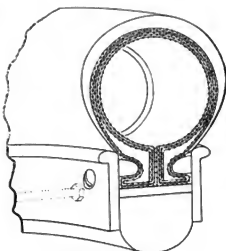
THE WARNER STEERING WHEEL

and cannot be broken off; when placed in steering position it locks automatically and is perfectly rigid; and when tilted the rim of wood wheel cannot hit the post, thus preserving the finish of the rim. The wheels are made in all sizes.

**LEON RUDAY.**—A number of French novelties handled by this importer are shown, including Lacosta mechanical oilers, horns, clocks, oil syringes, coils, throttle and spark lever control levers, and particularly a new device to cut out one or more cylinders to determining which one, if any, is missing.

**SPRINGFIELD METAL BODY CO.**—Aluminum and sheet steel bodies in king of the Belgians and other popular styles are the line of this exhibitor. They are made in sizes for all cars and a specialty is made of bodies with oval top square hoods or other hoods of similar shape. These bunnets may be either of aluminum or steel. Cellular coolers and canopy tops are also produced.

**INDIA RUBBER CO.**—Taking advantage of the troubles which fall to the lot of the automo-



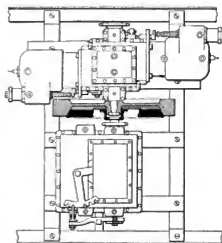
THE INDIA DETACHABLE TIRE

bilist who uses pneumatic tires, the India Rubber Co. shows a number of samples of solid tires, together with its full line of pneumatics. In addition to a tire of the G & J type the company has a tire of its own, which has some features of a nature different from the G & J type. The India single tube motor tire and a single tube pneumatic tire for carriages are also shown.

**J. B. COLT CO.**—The feature of the acetylene lamps shown is the generator, which comprises the usual chamber and a removable cover provided with a simple fastening arrangement whereby an hermetically sealed cartridge of calcium carbide may be inserted. When this cartridge is used up the cover is removed and the cartridge taken out bodily and thrown away. The device, of course, obviates the trouble of cleaning the generator chamber of free slacked carbide, which often hardens and cakes.

**R. E. DIETZ CO.**—This company has been making oil lamps for 63 years and only about a year ago put a gas lamp on the market. In the gas lamp the water is fed to the carbide through a capillary film and the amount of water furnished is controlled by the pressure of the gas. Three styles of gas and three of oil lamps are exhibited.

**BRENNAN MOTOR MFG. CO.**—Motors from 6 to 20 horsepower and a full line of sliding gear transmissions, giving three forward speeds and a reverse, for chain drive, level gear drive to counter shaft or direct to rear axle, constitute this display. The crank case of the motor is of a new design with substantial

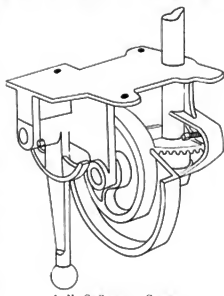


BRENNAN MOTOR AND TRANSMISSION

brackets or base so that it may be fastened with ample clearance to clear the periphery of the balance wheel. The cylinders, valve chamber and water jackets are cast in one piece. All cylinders and valves are made to standard gauges. The connecting rod is made of forged steel and has interchangeable bronze bushings both at the pitman and wrist ends. The carburetors shown are of the float feed type.

**EDWIN L. SMITH.**—Boston comes to the front with what is termed the I. M. C. automobile steering check. On the lower end of the steering wheel post is a bevel gear, which meshes with another attached to an eccentric cam track, which in turn operates a cam attached to the arm which connects the rod leading to the steering knuckle. It is similar in action to the cam and track of a Gordon printing press. While it is easily operated, there seems to be little chance for movement through the wheels turning. The entire gear is enclosed in an aluminum case, making it practically dust proof.

**THE SCOVILLE & PECK CO.**—The exhibit is of oil and acetylene lamps, the former in three patterns and the acetylene in self-contained and separate generator patterns. The Standard oil lamps, large size, are made as side lights for touring cars; the style F, as side lights for runabouts, and the tail lamps, for touring cars. All the lamps are of tubular type of



I. M. C. STEERING CHECK

construction and allow of fresh air being carried direct to the burner. The acetylene headlights are heavy, the carbide holder and generator being made of heavy brass tubing. Instead of sheet metal. The reflectors are turned out of solid silver on lathe and fitted to templates to insure accuracy in reflection. The independent generator lamps are made on the same general lines and of the same bright material. The generators are supplied with brackets so they may be mounted on the dash if desired. The gas, when shut off, automatically closes the water supply, thus preventing further generation until the gas is turned on again.

**STANDARD CARRIAGE LAMP CO.**—The line of lamps shown comprises side and tail lamps in popular forms and several patterns of big acetylene headlights. A line of new electric side, tail and headlights are also shown.

**ELECTRIC CONTRACT CO.**—This exhibit contains a complete line of the Star hand lamps and the E. R. G. ignition batteries.

**MOTOR AGE**

Published Every Thursday by  
THE TRADE PRESS CO.

1303 MICHIGAN AVENUE CHICAGO  
Telephone Calumet 7011

New York Office, 114 West 18th Street,  
London Office, American Publication Bu-  
siness, 10 Manor Park Rd., Heston, N. W.

Entered at the Chicago Post Office as Second  
Class Mail Matter

Subscription, Two Dollars per Year  
Foreign Subscriptions, Four Dollars

Any Newsdealer may obtain Motor Age through  
the Western News Co., Chicago, at any  
of its branches, on a returnable basis

## HORSEPOWER NOT ALL



VEN a casual observer of the automobile trade in France must have noticed that a decided change has taken place in the manufacture of motor cars in that country. Instead of giving almost all their attention to the production of racing cars, or to putting on the market touring cars of racing form, but with a few accessories which are not required on the kilometer trial car, the French manufacturers have entered seriously and earnestly the field for which automobiles are really most wanted and needed.

Heretofore many makers have expressed in action the thought that because a relatively great number of people bought cars having 40, 80 or even 100 horsepower, that this was the most desirable line to make, that most of the people who could afford to pay for an automobile wanted these touring racers, these locomotives. There has, of course, always been a demand for smaller cars and the manufacturer generally had a few toy machines of 6 to 8 horsepower. A few makers also had cars listed at 10 to 12 horsepower, but few had anything to offer between the two extremes—the very low and the very high power cars.

The public is asking for more convenient cars. It has liked the racers and the big cars that were made for touring at railway speed; but it has awakened to the desirability of the real pleasure car of moderate power, with large and convenient seats, with a top, with ample mudguards and with long wheel base and big tires. A demand has been created so rapidly that it has become evident to the manufacturers that the public's taste has changed, and changed decisively.

This change in the people's taste and the manufacturers' desire to recognize it has been nowhere more evident than at the show in Paris last month; especially when the cars there exhibited are compared with those at the show of 1902. In 1902 there were more racing cars and chassis of racers exhibited than last month, and there were also many more high powered touring cars, while there was almost none of the comfortable, small pleasure car style, with tops or limousine body. The majority of the makers listed three or four sizes, the

majority of which were above 24 horsepower.

At the show of December, 1903, taking us a basis forty-four of the leading French manufacturers exhibiting at the salon, twenty-four of them displayed 12-horsepower cars, seventeen 16-horsepower cars, thirteen 20-horsepower cars, fourteen 24-horsepower cars, nine 30-horsepower cars, three 35-horsepower cars, eight 40-horsepower cars, and two 45-horsepower cars. The only three 60-horsepower cars shown were of foreign manufacture, while the only 80-horsepower French car was equipped as a racer adapted to touring purposes.

It appears, furthermore, from the cars displayed, that 40 horsepower is about the limit for big touring cars, while several of the most prominent concerns that heretofore dealt almost exclusively in heavy cars have come to the front with 6 and 8 horsepower light cars. Taking the exhibition as a whole, 12, 16 and 18 horsepower cars predominate, and in the strictly heavy class of luxurious touring cars with coupe, limousine and other stylish bodies the majority are of 24-horsepower.

It cannot be otherwise than that there is a reaction in favor of more conservative construction. French makers are paying more attention to meeting the conditions of road travel and less to the requirements of speed. It has been found that excessive power is not necessary to propel even a six or seven-passenger car over the roads at a brisk touring gait; and the public and the makers have been susceptible enough to appreciate the fact that the provision of more than ample power is an unnecessary and wasteful proceeding. Racing cars have come to be looked upon as constituting the minority division of the country's production; as chiefly of service to manufacturers as advertising mediums, and not greatly important in the retail market. Briefly, France is finding the spectacular for the useful.

## CHILD-LIKE INNOCENCE



MANUFACTURER is not always to blame when the products of his factory do not live up to the promises made in his catalogue. The use of a little horse sense—even when handling an automobile—on the part of the consumer, will often solve problems and surmount difficulties, and the manufacturer may thereby be vindicated in his catalogue claims.

A few days ago an angry customer went into a supply store in Chicago and vigorously scolded the salesman because the automobile lamp he had purchased a few weeks before was not working satisfactorily. He said the light was so poor that he had to strike a match to see if it was going.

The salesman of his remark was all lost on the customer, who was busy taking the lamp apart. In a few minutes he displayed the inside of the lamp all clogged with dirt, mute evidence that the owner had never attempted to clean it. The deposit was removed and the



lamp burned again with its wonted brilliancy. The crestfallen customer acknowledged that "he hadn't thought of cleaning it," and said he would investigate more the next time before making complaint.

The same salesman told of another customer whose kerosene lamp refused to produce any light. The suggestion was made that the lamp needed kerosene. The customer "hadn't thought of that," and investigation discovered the reservoir quite dry. The kerosene solved the mystery and the lamp was again "a good lamp."

From these incidents it may be deduced that by the proper manipulation of the organs of thought by the user of the article, the long-suffering manufacturer will escape much unmerited blame.

Still the manufacturer has no occasion to go to sleep in his own righteousness. Today is a day of progress.

## THE BROWNLOW BILL



CONGRESS will within the next 3 weeks consider the passage of the Brownlow bill appropriating \$24,000,000 as national aid for the building of good highways. This bill was introduced over a year ago. Its provisions are practical and it would result in the expenditure of \$48,000,000 in the construction of wagon roads throughout the country. It is one of the natural results of the long pending good roads movement.

The advocates of good roads have toiled for years and have accomplished much direct good of a local character. They have created a popular desire for better highways. They have changed the sentiment of the farmer and made him know the selfish advantages he will derive from good roads. They have sought to join the hundred and one interests affected by the condition of the highways. They have, in a measure, brought the nation's legislators to a realization of the past lack of wisdom of the United States in road making and maintenance, and of the almost absolute necessity of sweeping reform.

The time is ripe for decisive action on a big scale. The Brownlow bill meets the requirement of the time in the two respects of putting upon the nation some of the burden of building the nation's highways and stimulating the states to renewed and greater efforts toward the improvement of their roads individually. Briefly the bill provides as follows:

1—For the creation of a department at Washington, with proper superintendents and employees, to take care of the building of these roads.

2—The \$24,000,000 to be appropriated is available at the rate of \$8,000,000 a year for 3 years, and is to be divided among different states according to their population, except that no state is to receive less than \$250,000 of this money.

3—Each state, county or town receiving federal aid must add a like amount to the sum received from the United States government.

4—Should any state not take the amount allotted to it under this law before January 1, 1907, all such amounts not taken up are to be reallocated in proportion to the population



of the different states which have taken up their entire allotment.

5.—A like amount must be added by the states or counties receiving aid, so that \$48,000,000 are to be spent on roads. This distribution by the number of inhabitants is far more equitable than the distribution of some \$32,500,000 a year under the rivers and harbors bill, which goes principally to the seaboard states and to the Mississippi delta.

The complete bill was published in *MOTOR AGE* about a year ago. It may on first thought seem extravagantly framed, but when one stops to consider the vast sums which the government has spent in other improvements, it is not extravagant to plan for the spending of \$24,000,000 after a hundred years and more of wretched roads.

France has 23,603 miles of improved roads, built and maintained by the government. Other countries in Europe have long since realized the necessity of the government assisting in highway improvement. It is consistent that the government should do so if for no other reason than that road improvement is the one public improvement which affects the greatest number of interests.

Among these interests is that of automobilism, and just as it is readily shown that the duty of the government to assist in advancing the interests so affected, it is equally apparent that automobilists and every other class of road users owe themselves the selfish duty of using whatever influence they have in helping to bring about the passage of such a measure as the Brownlow bill.

The users of the road for pleasure purposes have always been foremost in good roads advocacy on account of that strange perverseness of human nature whereby those who would be most materially benefited by good roads were for years the very ones to most protest against extraordinary expenditure to get them. This feeling, happily enough, has changed, and the different communities of the country are in a mood receptive of encouragement.

The automobilists of America have the best opportunity they have ever had to work directly and effectively, and through the other interests to which good roads are advantageous. They should not procrastinate in taking action which will assist the passage of the Brownlow bill. As clubs and as individuals let the motorists of the country do what they can and let them do it quickly and vigorously.

#### MOTOR BOOK WANTED

NOTHING matter has been written and published concerning automobiles to stock a small memorial library. Yet there is practical need of a book on automobile construction, which has never been filled. There are three classes of books on automobile subjects—

those which are so abstruse as to be incomprehensible to all but the technically educated man; those which contain absolute rot or antedated information or other poorly selected subject matter; and those which con-

tain good, concise, understandable information, but which lack arrangement, making it utterly impossible to use them as books of reference.

There are books which contain convenient formulas, but whose language is so veiled in higher mathematics and technical terms as to be useless to all but the expert designer, who is supposed to know these same things himself. There are other books which are supposed to cover the general subject of automobiles, and which laboriously describe systems of construction several years out of date at the time of publication. There are still other books which deal in automobile care, repair and maintenance in a popular manner, but in which the reading matter has not been arranged by any system whatever, and is so badly mixed and jumbled that it would be absolutely impossible to correct; and completely index it.

Few men in automobilizing care to read a semi-technical book as they would a novel. The greatest usefulness of such a work is for reference. Motoring has need of a hand book

### A GHOST OF LONG AGO

Looking backward from the year 1950  
Aloysius Coll, in the New York Sun  
muses on "The Old Automobile" as  
follows:

Out there in the sun and rain it stands,  
A ghost of the long ago;  
In the summer blistered by the heat,  
In the winter white with snow;  
In a heap of rusty scrap forlorn,  
Where the nettewort is high.  
It resists so silent and so still,  
In the dreams of days gone by.  
A field mouse nests in the muddy bed;  
A hungry grasshopper steals  
The scaling paint, and a spider weaves  
A web on the ancient wheels;  
And sometimes, up on the shaky seat  
Alights a curious crow—  
Some old chauffeur to his place returned,  
A ghost of the long ago!  
And sometimes little children climb  
Up to the rickety thing,  
And make believe that they speed away.  
As they laugh and shout and sing:  
And then I dream of a day gone by,  
And the old wheels catch the thrill  
Of the day my old sweetheart and I  
Went dashing down a hill!  
The rusty rods, and the chains and tie-rod—  
Ah, grandfathers are they  
Of the fleetest steeds that thunder by  
On the smoother roads today!  
But it must sit— as I do here,  
An old and worn-out man,  
And dream of the scenes of long ago,  
And the races that it ran!  
In a heap of scrap and nettewort  
Half hidden from the eye,  
It stands forlorn and silent, while  
The years are passing by:  
In the summer blistered by the sun,  
In the winter bare with snow—  
Out here with me in the last long stop—  
And the dreams of long ago!

of motor car information which is clearly and plainly written, in which all mathematical problems are reduced to their simplest possible forms and in which the matter is carefully and intelligently arranged and fully indexed.

This work ought to touch upon the general subject of the principles of automobile construction; current practice; present the most practical rules for working out the more common problems of automobile design; enumerate the possibilities of trouble in the use of a car, and tell the best known ways of locating and remedying such troubles; and give practical advice concerning the care and use of automobiles.

It would be no small task, the writing and compilation of this work; but if there has been any profit whatever in the writing and publishing of other works of a similar nature, there should be substantial profit in making this one which is so much needed.

\*\*\*

The present year promises to be one of rejoicing both for horses and lovers of horses. The noble animal will witness his emancipation from drudgery and hard work to an extent that will be truly amazing. The motor this year will "get down to business" and take its rightful place in practical business life. The transfer of heavy freight will be by motor, the merchants have begun to deliver dry goods and groceries by motor and even the farmer to plow by motor. The time is come for the practical adoption of the motor car to everyday vocations. The adoption of the automobile in business will probably be limited this year only by the output of the factories making such cars. This year will rank as the first of the commercial motor vehicle era.

\*\*\*

Concerning automobiles and the possibilities of introducing American machines in Switzerland, an American consular officer says that one of the largest American firms making automobiles has, since last February, sold about sixty such machines in Switzerland. The head of the agency is at Zurich, and there is a sub-agency at Geneva. There are now two successful automobile factories in Switzerland, one in Frauenfeld and the other in Bern; the first is said to have sold its entire production for this year in England.

\*\*\*

An English statistician has figured that by the substitution of motors for horses in agriculture the saving would be \$30,000,000 in Great Britain alone. He says that eight men and a motor can reap and thresh 10 acres a day, while under the present system it takes thirty men, two boys and nine horses to do the same work. The cost of corn cultivation is estimated at \$3.10 per acre by horse labor and \$1.40 by motor.

\*\*\*

Ford's mile on the ice, Ford himself, and the big 999 machine are as much talked about and as much criticised as anything. Whatever turn may be taken, the mile will not long remain if it is a possible thing to push it out of the way. Every concern which pretends to build anything capable of speed now has the mile straightaway record bee buzzing in its bonnet.



# FRENCH ARE ARROGANT

## Over-Confidence Renders Them Blind to Motor Car Requirements in Countries to Which They Sell Continuously—Good French Roads Do Not Furnish Severe Tests of Automobiles

An official of the Austrian Automobile Club, who is one of the leading dealers in Vienna, has made several interesting remarks concerning the French manufacturers' methods of doing business with foreigners. He gave his opinion conditionally that his name would not be mentioned.

After stating that France lends all nations in the manufacturing of automobiles, that its cars are in great demand and that the agents for the French makers were doing a splendid business, the Austrian authority continues as follows:

"This brilliant and satisfactory condition should, however, not prevent French manufacturers from giving attention to the requirements of foreign markets, or they will certainly have to repent for their independence ere long.

"It is no mystery that the French makers do not care to find out what foreigners wish and need; they don't care to inquire, or even to see for themselves; they have the bad tendency of thinking that everything that is found satisfactory in France should prove so in foreign lands. This idea may lead to disastrous mistakes, which may not be easily remedied after they have been going on for a certain time.

"Everybody knows that the French roads are the finest in the world, but why do French manufacturers think that because their cars give the very best satisfaction on the roads of their country, that they ought for this reason to give fully as good a service on foreign roads?

"This is a mistake on their part, which they ought to have been able to have found out long ago. The springs and axles which are fitted to their cars are all right for the Paris-Bordeaux road, but they are not all right for the rocky, rough, primitive paths of Russia, or the miserable thoroughfares of some parts of Austria. The same remark fits also the conditions in the majority of other countries. There are other parts of French cars that are not up to the needs of foreign countries, however satisfactory they have proven themselves to be in the home country.

"The troubles dealers have in handling French cars are sometimes very aggravating. It happens frequently that when a French car arrives everybody admires its beautiful bodywork, its fine finish, its elegant design. Much is naturally expected of it. But before the car has been actually in a severe, or even a mild test, it is noticed that the springs are too weak; that the ribs do not resist the shocks of the roads; that the base of the car is too near the ground. Disappointment of the keenest kind follows; complaints are made before the brand new car has been in the hands of the dealer 24 hours; the latter naturally communicates with the maker, and generally receives word that the various unsatisfactory points will be remedied if the car is sent back. Instead of making all the desired changes, however, the French maker either makes none or so few, and such ones of minor importance that when the car returns after a long delay, the dealer and his prospective buyer are no

more satisfied than before. Generally the dealer receives a long explanatory letter in which the maker tries to explain that the points referred to are all right and that the dealer and the buyer will find out soon that the car will give just as good satisfaction as in France.

"The result of all this is that the dealer very often loses customers and that he will look to other countries for his supply of cars. Most of the time the Germans profit by this, because, although their cars are generally not as elegant, as well finished or as a whole up to the French standard in a mechanical way, they at least will make them so ordered. Furthermore, they have some models which have been made so as to come within the requirements of foreign countries. Here again one must recognize the commonsense of the German maker, who studies and becomes well posted in what the other people want and need.

"When asked why he does not make cars, or changes on cars to suit the foreign demands, the French manufacturer generally says: 'What is the use of going to the trouble to change the designs, when the home market takes the entire output?' Of course, this means that the French makers would not have to do business with foreign countries, but while some might think that the argument is safe, it will certainly be different once there is an overproduction. They will then find that others have taken their place.

"This is not simply my personal view, but I feel confident it expresses that of hundreds of other dealers all over the world. The trouble is," added the Austrian dealer, "that nobody ever persists in calling the French makers' attention to these points. Those who really favor its products could not render the French trade a better service than by telling of the shortcomings and the requirements."

### TRANSMISSION DISCUSSED

Boston, Jan. 20.—In the third lecture of the gasoline car series before the automobile school of the Boston Y. M. C. A. last night the speaker dealt principally with the different forms of speed changing mechanism and methods of transmission of the power to the driving wheels, and spoke of the two special arrangements which are necessitated in the application of the gasoline motor to road vehicles—first, a friction clutch or some equivalent device for connecting and disconnecting at will the power from its work; and second, a change of ratio between the motor speed and the driving wheel speed capable of being regulated at will and producing the effect of absorbing at one turn of the traction wheels the power of a greater or less number of engine turns dependent upon the conditions to be negotiated.

It was pointed out that almost all the combinations of mechanism by which it is possible to secure varying speed ratios between a driving and a driven shaft have been tried with a view to their application in mechanical traction, and that a number of widely differing forms are actually in use for the purpose. Among the methods of speed variation used are stepped pulleys and belts, the separate clutch system,

sliding gears, the sliding key system, planetary combinations and the friction drive. The use of belts was spoken of as obsolete. The separate clutch system, employing gears always in mesh, was described and its advantages and defects pointed out, and the sliding key method, which bears some resemblance both to the separate clutch method and the sliding gear system, was described and commented upon. The sliding gear system, known also as the Panhard or clutch gear system, which is so popular at the present time, was discussed and its good and bad points dwelt upon. The planetary gear, so generally used in light runabouts and which has the advantage of a direct drive at the high speed, was illustrated and explained and some of its weak points as well as good qualities discussed.

Allusion was also made to the friction drive by which an indefinite number of speed graduations may be secured. This method has never taken an important place in the industry. The necessity which calls for the use of the differential gear and its construction in two of its typical forms were explained and the attention was called to the several ways in which the power may be transmitted to the traction wheels. The live axle, with sprocket gearing or level gearing, and the solid axle with double chain drive were briefly discussed.

### SKEPTICS IN THE EAST

New York, Jan. 16.—The great drop in the mile record figures by which Henry Ford cut off 6½ seconds from the previous record of 46 seconds made by M. Angieres, caused some of the Eastern automobilists to doubt its accuracy, and the A. A. A. racing board asked that a surveyor's certificate of the distance of the course, details of the method of timing and affidavits of the timers be sent to the board. If this time is shown to be regular it will possibly be placed in a category by itself and not classed with records made on land, thus making it similar to wind shield records in trotting and cycling.

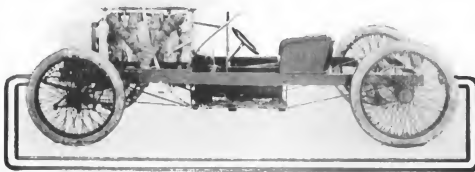
J. M. Colquhoun, one of the six men who timed the event, said that the three watches at the start were exactly the same. At the finish one of the watches was fast one-fifth of a second, and the time of the two pieces that agreed was accepted. Before the machine was started a test of the six watches was made. All were snapped to the fraction of a second, and agreed exactly, and 28 minutes later they were stopped, and all were exactly alike. The one watch differing from the other two at the finish Mr. Colquhoun thinks may have been due to some mistake in stopping it.

### PACIFIC COAST EXPRESS

San Francisco, Cal., Jan. 13.—A corporation called the California Auto Express Co. has been organized here to carry on an express service in San Francisco and the surrounding country. The company will contract for general parcel delivery with business houses, and will also provide an automobile omnibus service to hotels and other points about the city. A storage and repair department will be maintained, and later on a cab service will be put in operation. R. Emerson Warfield will be the president and business manager of the company. The other directors are H. W. France, secretary; E. C. Peck, treasurer; J. H. Goodman, James W. Field, D. T. Ray and G. C. Bowman. The present indications are that the company will do a big business.

# BRISK COMPETITION AT FLORIDA TOURNAMENT

Most of the Prominent Racers Enter the Scheduled Events—Record Breaking Almost Sure—W. K. Vanderbilt, Oldfield and Ford Head the List of the Speed Stars



The Reconstructed Ford Racer 1901

New York To Send a Large Force of Contestants and Enthusiasts—The Cars and Men Seen at Last Summer's Track Meets Will Be On Hand—The Programme and the Entrants

The entries in the Daytona Ormond automobile race tournament closed Saturday with nearly every fast automobile in this country on the list. The only entry received too late for the regular event was that of Dominick Lamberjack, with a Clement car, and he may take part in the record trials. Henry Ford and his record breaker may also be entered in these trials. The principal events will take place on the first three days, and on the succeeding days will occur the special record trials at all distances. There will also be competitions for motor cycles, runabouts and vehicles in special classes. The principal events are as follows:

## FIRST DAY, JANUARY 28

One mile championship. American Automobile Association; free for all.

Owner.	Machine.	H. P.	Cyl.	Weight.	Driver
W. K. Vanderbilt, Jr., Mercedes.	100	4	2,000	Owner	
B. M. Stanley, Jr., Decauville.	40	4	1,600	F. Fredericks	
H. L. Bowden, Mercedes.	60	4	2,375	Owner	
S. B. Stevens, Mercedes.	60	4	1,570	Owner	
F. A. La Roche, Darracq.	40	4	1,570	Owner	
W. G. Brokaw, Renault.	30	4	1,600	M. Bernin	
A. Winston, Winton.	70	8	2,000	B. Oldfield	
Peeries Motor Car Co., Peeries.	70	4	2,000	Joseph Tracy	
W. C. Baker, Baker electric.	...	...	...	Owner	

One mile, open only to vehicles which have no record for a mile in better

J. Bowden, Stanley	5	800	Owner	
G. Brokaw, De Dion-Bouton	8	2	750	N. M. Powell
F. A. La Roche, Darracq.	40	4	1,570	Owner
Louis S. Ross, Stanley	6	2	2,375	Owner
Walter Christie, Christie	30	4	1,275	Owner
J. Insley Blair, Panhard	35	4	1,750	M. W. Ehrlich

Ten miles handicap—Class A and B

B. M. Stanley, Jr., Decauville.....	40	4	1,600	E. Fredericks	
W. G. Brokaw, De Dion-Bouton.....	8	4	750	N. M. Powell	
S. B. Stevens, Mercedes.....	.....	.....	.....	Owner	
W. G. Brokaw, Renault.....	30	4	1,600	M. Bernin	
F. A. La Roche, Darracq.....	40	4	1,570	Owner	
H. L. Bowden, Mercedes.....	60	4	2,375	Owner	
William Wallace, De Dietrich.....	30	4	2,400	Owner	
J. Insley Blair, Panhard.....	24	35	4	1,750	M. W. Ehrlich
Walter Christie, Christie.....	30	4	1,275	Owner	

Five miles invitation, open only to gentlemen amateurs—Class B vehicles

W. K. Vanderbilt, Jr., Mercedes.....	100	4	2,000	Owner
B. M. Stanley, Jr., Decauville.....	40	4	1,600	Owner
S. B. Stevens, Mercedes.....	60	4	1,570	Owner
W. G. Brokaw, Renault.....	30	4	1,600	Owner
James L. Breeze, Mercedes.....	40	4	2,200	Owner
Louis S. Ross, Stanley.....	6	2	800	Owner
H. L. Bowden, Stanley.....	5	...	800	Owner
William Wallace, De Dietrich.....	30	4	2,400	Owner
J. Insley Blair, Panhard.....	24-35	4	1,750	Owner

One mile against the record—Class A and B

W. K. Vanderbilt, Jr., Mercedes.	100	4	2,000	Owner
B. M. Stanley, Jr., Decauville.	40	4	1,600	E. Fredericks
H. L. Bowden, Mercedes.	60	4	2,375	Owner
W. G. Brokaw, Renault.	30	4	1,600	M. Bernin
Louis S. Ross, Stanley	6	2	800	Owner
J. Insley Blair, Panhard.	24.35	4	1,750	M. W. Ehrlich
Walter Christie, Christie	30	4	1,275	Owner
A. Winston, Winton	70	8	2,000	B. Oldfield
Peeries Motor Car Co., Peeries.	70	4	2,000	Joseph Tracy
W. C. Baker, Baker	...	...	...	Owner
H. L. Willoughby, Autocar.	10	...	...	H. L. Willoughby

## SECOND DAY, JANUARY 29

Five miles; free for all—Class A

W. K. Vanderbilt, Jr., Mercedes.	100	4	2,000	Owner
B. M. Stanley, Decauville.	40	4	1,600	E. Fredericks
H. L. Bowden, Mercedes.	60	4	2,375	Owner
F. A. La Roche, Darracq.	40	4	1,570	Owner
W. G. Brokaw, Renault.	30	4	1,600	M. Bernin
William Wallace, De Dietrich.	30	4	2,400	Owner
Walter Christie, Christie	30	4	1,275	Owner
A. Winston, Winton	70	8	2,000	B. Oldfield
Peeries Motor Car Co., Peeries.	70	4	2,000	Joseph Tracy
W. C. Baker, Baker	...	...	...	Owner

Five miles, A. A. A. championship, open to all classes; 1,000 pounds and over; prize to winners of both Class A and B

W. K. Vanderbilt, Jr., Mercedes.	100	4	2,000	Owner
B. M. Stanley, Jr., Decauville.	40	4	1,600	E. Fredericks
H. L. Bowden, Mercedes.	60	4	2,375	Owner
F. A. La Roche, Darracq.	40	4	1,570	Owner
W. G. Brokaw, Renault.	30	4	1,600	M. Bernin
William Wallace, De Dietrich.	30	4	2,400	Owner
Walter Christie, Christie	30	4	1,275	Owner
A. Winston, Winton	70	8	2,000	B. Oldfield
Peeries Motor Car Co., Peeries.	70	4	2,000	Joseph Tracy
W. C. Baker, Baker	...	...	...	Owner

Owner.	Machine.	H. P.	Cyl.	Weight.	Driver
W. K. Vanderbilt, Jr., Mercedes.	100	4	2,000	Owner	
H. L. Bowden, Mercedes.	60	4	2,375	Owner	
S. B. Stevens, Mercedes.	60	4	1,570	Owner	
W. G. Brokaw, Renault.	30	4	1,600	M. Bernin	
J. Insley Blair, Panhard & Levenson.	24	35	4	1,750	M. W. Ehrlich
A. Winston, Winton.	70	8	2,000	B. Oldfield	
Peeries Motor Car Co., Peeries.	70	4	2,000	Joseph Tracy	
W. C. Baker, Baker	...	...	...	Owner	
One mile invitation, open only to gentlemen amateurs.	...	...	...	Class B vehicles	
W. K. Vanderbilt, Jr., Mercedes.	100	4	2,000	Owner	
B. M. Stanley, Jr., Decauville.	40	4	1,600	Owner	
H. L. Bowden, Stanley.	...	...	...	800	Owner
S. B. Stevens, Mercedes.	60	4	1,570	Owner	
W. G. Brokaw, Renault.	30	4	1,600	Owner	
James L. Breeze, Mercedes.	40	4	2,200	Owner	
Louis S. Ross, Stanley.	6	2	2,375	Owner	
William Wallace, De Dietrich.	30	4	2,400	Owner	
J. Insley Blair, Panhard.	24	35	4	1,750	M. W. Ehrlich
Five mile handicap—Classes A and B	...	...	...	...	
B. M. Stanley, Decauville.	40	4	1,600	E. Fredericks	
H. L. Bowden, Mercedes.	60	4	2,375	Owner	
S. B. Stevens, Mercedes.	60	4	1,570	Owner	
F. A. La Roche, Darracq.	40	4	1,570	Owner	
W. G. Brokaw, Renault.	30	4	1,600	M. Bernin	
William Wallace, De Dietrich.	30	4	2,400	Owner	
J. Insley Blair, Panhard & Levenson.	24	35	4	1,750	M. W. Ehrlich
Walter Christie, Christie	30	4	1,275	Owner	
Seven mile event—One mile, 1,900 class—Class A	...	...	...	...	
H. L. Bowden, Stanley.	...	...	...	2,375	Owner
F. A. La Roche, Darracq.	40	4	1,570	Owner	
J. Insley Blair, Panhard.	24	35	4	1,750	M. W. Ehrlich
Walter Christie, Christie	30	4	1,275	Owner	

## THIRD DAY, JANUARY 30

Ten mile championship. A. A. A. free for all—Class A

W. K. Vanderbilt, Mercedes.	100	4	2,000	Owner
B. M. Stanley, Jr., Decauville.	40	4	1,600	E. Fredericks
F. A. La Roche, Darracq.	40	4	1,570	Owner
W. G. Brokaw, Renault.	30	4	1,600	M. Bernin
Walter Christie, Christie	30	4	1,275	Owner
A. Winston, Winton	70	8	2,000	B. Oldfield
Peeries Motor Car Co., Peeries.	70	4	2,000	Joseph Tracy
W. C. Baker, Baker	...	...	...	Owner
Twenty-mile 50 seconds class—Class A	...	...	...	...
B. M. Stanley, Jr., Decauville.	40	4	1,600	Owner
S. B. Stevens, Mercedes.	60	4	1,570	Owner
W. G. Brokaw, Renault.	30	4	1,600	M. Bernin
B. M. Stanley, Jr., Decauville.	40	4	1,600	E. Fredericks
H. L. Bowden, Mercedes.	60	4	2,375	Owner
William Wallace, De Dietrich.	30	4	2,400	Owner
Walter Christie, Christie	30	4	1,275	Owner
Ten mile invitation, open only to gentlemen amateurs—Class B vehicles	...	...	...	...
W. K. Vanderbilt, Jr., Mercedes.	100	4	2,000	Owner

Twenty-mile handicap—Classes A and B					
B. M. Stanley, Jr., Decauville	40	4	1,600	Owner	
H. L. Bowden, Mercedes	5	5	800	Owner	
S. B. Stevens, Mercedes	60	4	1,570	Owner	
James L. Breeze, Mercedes	40	4	2,200	Owner	
W. G. Brokaw, Renault	30	4	1,600	Owner	
William Wallace, De Dietrich	30	4	2,400	Owner	
J. Insley Blair, Panhard	24	35	4	1,750	Owner
Walter Christie, Christie	30	4	1,275	Owner	
B. M. Stanley, Jr., Decauville	40	4	1,600	E. Fredericks	
H. L. Bowden, Mercedes	40	4	2,375	Owner	
S. B. Stevens, Mercedes	60	4	1,570	Owner	
F. A. La Roche, Panhard	40	4	1,570	Owner	
W. G. Brokaw, Renault	30	4	1,600	R. Bernin	
W. G. Brokaw, De Dietrich	40	4	1,570	N. M. Powell	
William Wallace, De Dietrich	30	4	2,400	Owner	
J. Insley Blair, Panhard	24-35	4	1,750	M. W. Ehrlich	
Walter Christie, Christie	30	4	1,275	Owner	
Mile and twenty-mile record—Classes A and B					
William J. Vanderbilt, Jr., Mercedes	5	5	2,000	Owner	
H. L. Bowden, Mercedes	60	4	2,375	Owner	
Louis S. Ross, Stanley	60	2	800	Owner	
William Wallace, De Dietrich	30	4	2,400	Owner	
J. Insley Blair, Panhard	24	35	4	1,750	Owner
Walter Christie, Christie	30	4	1,275	M. W. Ehrlich	

## OVERFLOW EXHIBITION

## Thirty-Five Exhibitors at the Supplementary Show in Herald Square Hall—More Expected Later

New York, Jan. 18.—Simultaneously with the opening of the Madison Square Garden exhibition an overflow show, which is to last two weeks, began at the Herald Square exhibition hall, which has 65,000 square feet of floor space. Manager Chassand says he expects a conservative number of garden exhibitors to be added during the second week.

The exhibitors follow:

American Machine Mfg. Co., of Boston; spark plugs and coils.

American Automobile Storage Co., of New York; Baker electric cars.

The Auto Import Co., of New York; Mercedes. Roehrs-Schneider, Renault and Citroën cars. Babcock, Atwood & Bowen, of New York; Buffalo electric, Packard and Yale cars and Seabury automobile boats.

The Automobile, of New York. The American Inventor, of Washington, D. C. Clado & Widmayer, of New York; Cadillac and Adler cars.

Cushman Motor Co., of Lincoln, Neb.; automobile motors.

M. A. Cornell & Co., of New York; Raydient metal polish.

Adams (Cook's) Sons, of New York; lubricants.

Genera Automobile & Mfg. Co., of Geneva, O.; Genera steam cars.

The Horseless Age, of New York.

H. S. Harkness, special racer.

Highway Alliance of America.

Hendee Mfg. Co., of Springfield, Mass.; Indian motor bicycles.

Mead Cycle Co., of Chicago; Benz-Parschal cars.

Charles H. Metz, Waltham, Mass.; motor cycles and bicycles.

The Motor Car, of New York.

Motorcycle Co., of New York; Oldsmobiles.

Palmer Bros. of Concord, Conn.; automobiles and marine motors.

Reading Standard Cycle Mfg. Co., of Reading, Pa.; motor cycles and bicycles.

Rockaway Automobile Co., of Rockaway, N. J.; automobile starters.

Bray Motor Car Co., of Reading, Pa.; automobiles.

C. R. Radcliffe, of New York; T. S. Long distance automobiles.

William Bourne, of New York; accessories.

St. John Patent Rubber Tire Co., of New York; rubber tires.

Schulter Bros. Gear Co., of Oneida, N. Y.; gears and accessories.

Kenneth A. Skinner, of Boston; de Dion-Bouton automobiles.

Springer Motor Vehicle, of New York; automobiles.

Swan Electric Mfg. Co., of New York; semi-dry cell batteries.

Springfield Blinding Works, of Springfield, Mass.; portable houses for automobiles.

William H. Terwilliger & Co., of Amsterdam, N. Y.; steam vehicles.

Tennant Automobile Tire Co., of Springfield, O.; rubber tires.

United Motor Corporation, of Pawtucket, R. I.; Cameron automobiles.

## A. A. A. MEETS IN CHICAGO

The American Automobile Association will hold its annual convention at the Coliseum, Chicago, from February 8 to 13, inclusive. The election of officers and directors will be held Thursday, February 11, at 3 o'clock in the afternoon.

The following nominations for officers and directors have been made: President, Harlan W. Whipple, Automobile Club of America; first vice-president, John Fursh, Chicago Automobile Club; second vice-president, Judge W. H. Hotchkiss, Buffalo Automobile Club; third vice-

president, Milbank Johnson, Automobile Club of Southern California; treasurer, George Farrington, Automobile Club of New Jersey; secretary, C. H. Gillette, Automobile Club of America; directors, Dr. Julian A. Chase, Rhode Island Automobile Club; A. R. Parlington, Long Island Automobile Club; Samuel H. Valentine, Automobile Club of America; Windsor T. White, Cleveland Automobile Club; Barclay H. Warborton, Automobile Club of Philadelphia; Dr. W. E. Milbank, Albany Automobile Club.

## TO ABOLISH TOLL ROADS

## New York Assemblyman Introduces Bill Making End of Such Highways—Association Work

Syracuse, N. Y., Jan. 18.—Assemblyman Martin L. Cadin has introduced a bill into the New York State legislature to prevent boards of supervisors from renewing the legal existence of plank roads and other toll gate companies. Mr. Cadin has been investigating the subject of toll roads and came to the conclusion that all should be abolished. The measure was suggested by the application of the Cicero Turnpike Co. for a renewal of its charter for 35 years.

In speaking of the measure today Mr. Cadin said: "Toll gates are a relic of a past. They are out of date. They should be abolished, particularly where they are maintained within the corporate limits of a city. With the large appropriations which the state and counties are making annually for the construction of improved highways and in view of the liberal policy which prevails in all communities in relation to the repairs of roadways, the day is fast approaching when every toll gate in the state should be abolished. My bill is but one of many steps that could be taken in that direction. It will prevent these companies securing a lease of life beyond the period for which their present charters extend. I believe that the measure will receive favorable consideration. I will make it one of my preferred bills and exert my best efforts to secure its enactment into law."

Secretary-Treasurer Frederick H. Elliott of the New York State Automobile Association has received responses from the circulars which he sent out concerning the meeting of the association in New York during the show, leading him to believe that there will be a larger attendance than anyone has looked for.

The reduced rates which have been obtained on the railroads will be the cause of many people going to the show who are not members of the clubs but who are interested in automobilism.

## FACTORY AT AUCTION

The plant and factory of Clark Sintz, at Grand Rapids, Mich., will be sold at public auction January 28 by the Michigan Trust Co., trustee. The property consists of machinery, engines, shafting, tools and fixtures used in the factory, and also partly finished automobiles. The property is appraised at \$10,052.11 and will be offered for sale in parcels at first and finally as a whole.

One of the advantages claimed for motorists in fixing the date of the Gordon Bennett race for June 17 is that it will be before the beginning of the social season at Hamburg, and there will be plenty of hotel room and lower rates.

## VISITORS MAKE MERRY

## Almost Every Day of Show Week Has Its Meeting and Every Night Its Dinner—Social Events

New York, Jan. 18.—A date book is a necessary adjunct to the equipment of the visitor to the show this week if he wishes to attend all the banquets and meetings and conventions prepared by the different powers for his education and amusement.

On Tuesday the American Motor League stirred up the enthusiasm by opening a convention in the assembly hall at Madison Square Garden. The first day is "good roads day," and the speakers' list includes Senator A. S. Mann, of Florida; George A. Peorre, member of congress from Maryland; Martin Dodge, director of the Government Road Inquiry Bureau at Washington; ex-President A. R. Shattuck, of the A. C. A.; State Highway Commissioners McIntock of Massachusetts, Budd of New Jersey, and MacDonell of Connecticut; and State Engineer Bond, of New York. A stereopticon lecture by Assistant Director M. O. Elbridge, of the Government Road Inquiry Bureau concludes the program.

On Wednesday the program consists of addresses on subjects of general interest to automobilists by Prof. Carpenter, of Cornell; Prof. Hutton, of Columbia; Charles E. Burgen, A. L. Riker, E. W. Roberts, Henry Souther, Alexander Winton and others. The 2 days following will be devoted to forming local and state organizations.

The Automobile Trade Club will give a smoker at the Hotel Nevada Tuesday, and on Wednesday there will be a luncheon by the A. L. A. M. The second annual banquet of the Hyatt Roller Bearing Co. will take place Wednesday evening in Breton Hall.

Thursday is the date set for the special meeting of the New York State Automobile Association at the A. C. A. clubrooms, 753 Fifth avenue. The annual meeting of the N. A. A. M. will be held the same day at Madison Square Garden.

The Mudlarks will recount the experiences, hardships and pleasures encountered on the endurance run at a banquet in Assembly Hall, Madison Square garden, Thursday evening.

The annual banquet of the N. A. A. M. will be held at the Cafe Martin Friday, and on Saturday the A. C. A. will banquet at the Waldorf-Astoria.

## NEW EASTERN CLUB

About twenty of the fifty automobilists of Richmond county, Staten Island, have organized the Richmond County Automobile Club and elected the following officers: President, Charles A. Schultz, Great Kills; vice-president, Dr. William Bryan, Livingston; secretary, J. J. Warrell, St. George; treasurer, David N. Melvin, Port Richmond.

## ORDER CONSERVATIVELY

Syracuse, N. Y., Jan. 18.—The Brown-Lipe Gear Co. has completed its new storehouse at its plant in South Geddes street and is in shape to do a much larger business during 1904. H. W. Chapin, the manager, told a Motor Age representative before he left for the New York show that the outlook was excellent. "I notice," said he, "that the orders which we are receiving from manufacturers this year are more con-

servative than last year; they are trying to avoid the mistake which they made in 1903, when several of them ordered wildly and many more than they used. I believe that this year they will use all they order."

At the annual meeting of the stockholders of the New Process Raw Hide Co., which manufactures automobile parts, the following trustees were elected to hold office for the ensuing year: T. W. Meacham, C. L. Stone, Emil Laass, T. G. Meacham, D. E. Pettit, A. C. Vosburgh and J. F. S. Meacham. At the trustees' meeting immediately following, the old officers were re-elected as follows: President, T. W. Meacham; vice president, T. G. Meacham; secretary and treasurer, A. C. Vosburgh.

## NATIONAL AID NECESSARY

### Senator Latimer Tells Why It Is Imperative That the Government Assist Road Making

Washington, D. C., Jan. 18.—The cause of good roads received a decided impetus in the senate of the United States on Thursday, when Senator Latimer, of South Carolina, spoke at length in advocacy of his bill to establish a bureau of highways and to provide for national aid in the improvement of the highways. The details of this bill were published in the last issue of *MOTOR AGE*. Senator Latimer summed up his reasons why the federal government should aid in improving the common roads, as follows:

First—Because the history of road building demonstrates that a complete system of public roads has never been constructed in any country except by the aid of the general government.

Second—Because the revenues of the government are raised largely upon articles consumed by all the people, thereby distributing taxation equally, and as all the people should contribute to the construction and improvement of the roads, it is only by federal aid that this can be accomplished.

Third—Because it is the duty of the federal government to bear its just proportion of the expense for the construction and improvement of the roads which it uses for the delivery of the mails and for military purposes in time of war.

Fourth—Because better roads are a national necessity; they closely concern the general welfare of the nation and are therefore a proper object of national aid.

Fifth—Because a surplus of about \$260,000,000 is lying idle in the treasury which belongs to the people and should be expended for their benefit in a manner which will accomplish the greatest good to the largest number.

In Senator Latimer and Representative Brownlow the cause of good roads has two staunch advocates in the national legislature and they can be depended on to urge the necessity for the improvement of the national highways and to secure, if possible, federal aid to that end.

## MITCHELL RE-ORGANIZES

The Mitchell Motor Car Co. has been re-organized with a capital stock of \$300,000, and it will shortly take over the plant of the Wisconsin Wheel Works at Racine Junction, Wis. The company will continue the manufacture of the Mitchell motor cycle and motor cars.

The drive of an automobile should always be pumped up hard.

## TAKES FRESH BREATH

### Chicago Automobile Club Gets Its Second Wind and Will Hustle With Renewed Energy

Chicago, Jan. 19.—A new lease of life has been taken on by the Chicago Automobile Club since the inauguration of John Furson as president, and the members are beginning to realize that the club has a rightful place in the social and business life of the city, and that a little vigorous action will do wonders towards revivifying it.

The first move to arouse interest was the smoker given in December. This brought out a large number of the members, and the evening was so pleasantly spent that the united expression was in favor of more entertainment along the same line. This is now being provided for, and the next smoker is announced for Thursday evening, February 4. A more extensive program will be arranged and a large attendance is expected.

At a recent meeting a resolution was passed by which new members joining in January were to be exempt from the payment of dues for 6 months. This inducement, together with the active campaign carried on by the members in seeking applications, has resulted in quite a noticeable increase in the membership list.

Last week a letter was sent to every automobile owner in the city giving some facts regarding the club and telling why it merits interest and support. The letter says that the objects of the club are as numerous as the needs of that portion of the community which indulges in automobilism. An attractive, commodious and well furnished club house is maintained at 243 Michigan avenue, with all the facilities for comfort of a modern club, including dressing rooms, parlors, private parlor for ladies, smoking rooms, sleeping rooms and a cafe and private dining room.

In the rear of the club house is a large garage with accommodations for sixty automobiles, in which members may store their machines 24 hours without charge, or for longer periods for a nominal charge. There is also a repair shop in connection under the supervision of the club and in charge of an expert mechanic. Gasoline and lubricating oil can be procured substantially at cost. It is the intention to procure suitable quarters in one or more places out of the city, where members can go in the summer time and enjoy themselves either privately or socially, as they may choose.

The club's assistance is always at the disposal of the members in protecting the interests of the users of automobiles, in all legitimate ways, and one of the principal objects to which it gives its support is the movement in favor of good roads. The club has no desire to add to its ranks members whose sympathies are not in accord with the high standard it has set for itself; it desires the interest of all true lovers of the sport who are disposed to join in every effort which makes for the good of automobilism.

The club deserves the financial support at least, if not the active personal interest, of every owner of an automobile in Chicago.

## CLUB PAPER SUSTAINED

A strong effort has been made by some members of the Automobile Club of Great Britain to have the club journal discontinued, as the claim was made that the club lost money in its

production and also that it interfered with legitimate trade journals and worked an unnecessary hardship on manufacturers who were called upon to help support it by advertising in its columns. A vote was taken recently and the majority favored the continuance of the journal. An editing committee was also formed and the weekly cost will be increased by additional salaries.

## CHANGES IN HUB TRADE

### Several New Agencies Arranged—List of the Exhibitors of Local Show Complete

Boston, Jan. 18.—Dowling & Maguire have secured the agency for the Pierce cars in this city. They have taken headquarters on Boylston street in close proximity to the home of the Massachusetts Automobile Club. Heretofore this car has been handled in Boston by Percy Lewis.

Russell Drisko has received his first sample of the Clement-Hayari car, which, with the Walter, he is to handle this season.

Moore & Smith, agents for the Autocar, have at last secured quarters on automobile row. They will, however, retain their garage privileges in the Park Square automobile station.

A. E. Fuller has been appointed Boston representative for the Packard, which he will handle in connection with the Northern and the Orient.

The arrangements for the automobile show of the Boston Automobile Dealers' Association in Symphony hall the week of March 14-19 are practically complete and everything is in readiness for the exhibit. All the space has been disposed of, and Manager Campbell of the show committee has made public the list of exhibitors, which is as follows:

Kenneth A. Skinner	De Dion
J. H. MacAlman	Locomobile
Pope Mfg. Co.	Toledo, Hartford and Madison
Oldsmobile Co. of New England	Oldsmobile
Moore & Smith	Autocars
Stamula Motor Vehicle Co.	Columbus
Harry Fiedler	Winona
A. T. Fuller	Parkards and Northern
A. E. Morrison	Pierces
Heed Underhill Co.	Knox
Boston Auto Exchange	Thelpis
Russell Drisko	Clement
E. A. Gilmore	Handley
A. B. Bangs	Franklin
Crest Mfg. Co.	Crestedales
J. C. Colburn Co.	Cameron
G. H. Lowe	White
F. E. Randall	Stevens-Duryea
Automobile Headquarters	Chrysler
Chrysler I. Campbell	A. A. & P. Co. line
A. T. Fuller	Orient
P. G. Heed	Yale
Am. Bureau	Bureau
Lock Register	Wellington
Country Club Car Co.	Country Club
Hollander & Tangeman	F. I. A. T.
Dowling & Maguire	Pierce
C. F. Lyman	Lyman
C. S. Henshaw	Thomas
H. B. Gallagher	Richard Frazer
G. M. Brown	Apperson
20th Century Lamp Co.	Lamps
Continental Automobile Co.	Three
Continental Cycle & Sundry Co.	Accessories
National Oil Heating Co.	Kerosene burners
S. F. Benson	Oil tanks
Gray & Davis	Lamps

All of the automobile journals will have exhibits in the hall, while a big display will be made by the automobile class of the Y. M. C. A.

Henri Fournier will sell the Oldsmobile in France.

## NEW HARTFORD GARAGES

## Two Large and Finely Equipped Stations Being Built in the Connecticut Trade Center

Hartford, Conn., Jan. 18.—Distinguished in many things, Hartford is soon to be proud in the ownership of one of the largest automobile stations and garages in this country, free of posts and obstructions and located on the street level. Joseph and F. W. Dart and C. A. Kingsley have the work of a great addition to their station well under way. The new building will have a frontage of 40 feet on Trumbull street and will extend 178 feet, there connecting with the station erected last year and measuring 40 by 125 feet. This will give the Palace station nearly 13,000 square feet of floor space, free of posts, all on one floor, with an entrance on Trumbull street and two alley entrances on Church street.

Plate glass frontage will mark the Trumbull street facade and here will be located the repository for the display of the several cars for which the Palace station has the agency. Immediately following is to come the private offices of the managers and the business office for the bookkeeping staff. Next will come two rooms connected, with ornamental grill work, which will be the quarters for the new automobile club that is now being formed.

The aim of the promoters of the club is to make it a social organization, with committees appointed to look into the subject of tours, roadway improvement and subjects of legislation. It is possible that the club will officiate with some of the large bodies in the automobile sport.

Following the quarters of the club will come additional space for the quartering of vehicles. This space will give the station opportunity to more than double its capacity. The machine shop, too, has been given more room and new machinery is daily being installed. As soon as the season starts a force of men will be employed capable of making any repairs necessary to any type of car, with machinery at hand for their speedy and economical working.

The old station is to be changed about somewhat and will contain an enlarged room for ladies who may visit the garage. It is thought that this will be an appreciated feature with ladies who come in from out of town to shop. There will also be quarters for car drivers with wash room, etc. Other features have been suggested and it is likely that the Palace station will add to its equipment so that it will shortly have a paint shop, where the entire work of overhauling a vehicle can be done under one roof.

In its repository the Palace station will have several vehicles, and about the first of March will receive one of the new 22-horse tonneau Loconobiles. Two steam carriages of the same make will also be shown. The Autocar tonneau, the Northern touring car and the Northern runabout will complete the line.

S. A. Miner's Allyn street garage, too, is having its capacity doubled, Captain Miner having taken over the carriage repository of J. P. Allen. This gives Captain Miner plenty of storage space on the lower floor for vehicles and it gives him three floors accessible by elevator for the display of new cars. Another entrance will be put in on the Allyn street front, and it will be so arranged that ve-

hicles will enter by one entrance and exit by another. This will avoid confusion or waiting.

Quarters for Indies and for chauffeurs will be fitted up comfortably. The machine shop space will be increased and a new line of power tools installed. The gasoline and oils supply will be confined in space other than it now occupies, tending to greater safety and convenience. Special lockers for owners of carriages boarding at the station will be provided, with spaces for robes, etc. In the floors above will be displayed the cars for which Captain Miner is agent, the Oldsmobile and the Knox. The Knox has been a popular vehicle in Hartford ever since its introduction by Brown, Thomson & Co. as a three-wheeler. Several of these early ones are now running on Hartford streets.

## A. L. A. M. WELCOMES CHARLEY

## Serves Papers of Infringement on Mercedes Agent Immediately Upon His Arrival

New York, Jan. 16.—The warfare has begun between the Association of Licensed Automobile Manufacturers and M. Charley, the selling representative of the Daimler Motoren Gesellschaft, the maker of the Mercedes cars. The A. L. A. M. served papers on M. Charley yesterday, charging him with infringing on the Selden patent by bringing unlicensed cars into this country. The association has had the papers in readiness for several days, but held them back until some of the cars brought by M. Charley had been cleared through the custom house. The racing car of W. K. Vanderbilt, Jr., and the brougham of Frederick G. Bourne were cleared Friday. No special cars, however, were mentioned in the papers.

Charley immediately cabled the home office for instructions and then sought his lawyers here for advice. He says he will fight the claims of the association and also take action against all persons selling or purchasing Mercedes cars that do not bear the Mercedes license, which he claims he alone is privileged to give. He says he sells cars to American customers, making the delivery in Paris, and the entry to this country is arranged by the customers. Despite the opposition of the A. L. A. M. he is negotiating with several firms in the United States for the sale of Mercedes cars.

To further complicate matters, a claim has been put forward by Paul La Croix, director of the Société Franco-Américaine d'Automobiles, that his company has a contract with the Daimler company similar to that of M. Charley.

An attorney questioned on the merits of the case told a Motor Age representative that M. Charley could be served with an injunction and would be compelled to put up bonds to cover any possible damage that might be inflicted through his continuing to sell unlicensed cars. An injunction is allowed in patent cases when the alleged infringer is likely to continue to sell after being served with papers in the suit by the plaintiff.

## FORMULA ERROR

In the Readers' Clearing House department of this issue part of a formula for determining the correct compression ratio or clearance of a motor reads "D equal C-8." It should be "D equal C+8." The mistake was not discovered until after the form containing it had been printed.

## CHAUFFEUR'S CLUB HOME

## Chicago Operators Organize a Proliferous Club and Plan a Building in the Motor Rialto

Chicago, Jan. 18.—The Chicago Motor Club, the new association of professional operators, held its first meeting last Wednesday evening at the office of the Cadillac Co. of Illinois, 1312 Michigan avenue, and elected the following officers: President, John Conroy; vice-president, Arthur Sanderson; secretary, William Foreman; treasurer, O. C. Brundage; steward, Frank Brady; directors, Ralph Tacker, Adolph Ulrich, Robert Scott, Charles Richl, William Becker and E. E. Prye. Twenty-one applications for membership were received at the meeting. The club has received assurances of support and co-operation from nearly every dealer in the city, and the outlook is promising. It is said that a site for a suitable club house will be secured in the near future somewhere in the district bounded by Sixteenth street, Wabash avenue and the lake. Active members must pass a technical examination showing they are qualified to operate cars and make all repairs where no machine work is required. Associate members may be agents, salesmen or anyone interested in automobiles. The club will meet at the Cadillac office every Wednesday evening until it is located in its own quarters.

The stock of Edwin Austrian in the Ralph Temple & Austrian Co. has been purchased by Ralph Temple and the name will be changed to the Ralph Temple Automobile Co. Mr. Temple has been in the automobile business in Chicago for 33 years, opening one of the first houses for the retail sale of automobiles in the city. During the coming year he will handle several makes of gasoline cars, a line of electric, and possibly a steam car. The company will remove in the spring from 295 Wabash avenue to the new building which is being erected on Michigan avenue nearly opposite the Logan monument.

The Knox Automobile Co., of Springfield, Mass., has opened a branch in the Ladington building, 531 Wabash avenue, next door to the Dan Canary Automobile Co. George A. Crane is manager of the new store.

H. Paulman, manager of the Chicago Automobile Repository Co., at 285 North State street, has closed a contract to enlarge the garage of the company so that it will have a capacity of about sixty machines. This company has the agency for the Pierce cars for Illinois and Wisconsin. Joseph V. Lawrence, formerly with the Ralph Temple & Austrian Co., is now associated with the Chicago Automobile Repository Co., and will devote his time particularly to the sale of Pierce cars.

The Holman Automobile Co., of Chicago, has increased its capital from \$20,000 to \$30,000.

The Fredonia will be sold this year from 1303 Michigan avenue by the Western Automobile Co. with John R. Beasley as manager. Edmund F. Dodge, who sold the Fredonia last year, will retain his interest in Fredonia, however, as he is the principal stockholder in the new company.

## MOTOR TAPPING

Sometimes it will be noticed that the engine, which has been running perfectly well and easily, will begin to make a slight tapping sound. It is not sufficiently pronounced to be called a knock, and very often it will puzzle the

driver to know what it is caused by, as he is apt to, and he will in the majority of cases, put it down to some slight peculiarity of his valves. As a matter of fact, it is nothing of the kind, but it is due to very slightly premature ignition. Of course, when an engine begins to labor with the ignition too far advanced, there is no doubt whatever as to the cause; but the comparatively light tap caused by only very slight premature ignition is not usually recognized as the first symptom of too early firing.

### TEST MOTOR ROAD TRAIN

New York, Jan. 19.—Hardly a day passes that the matter of heavy power for trucking purposes is not seriously considered by concerns which have depended upon horses for transportation; day by day it is shown that the power truck in some form is being put into the commercial world, so that the prophecies made only a few years ago are now rapidly being realized.

The Gibbs Engineering & Mfg. Co., of Glenoble, L. I., has just finished a traction engine and train of cars for the Massey Station Mining Co., of Massey Station, Canada, and on Thursday of last week made an official test on the roads near the company's plant. The spectators included a number of engineers, scientific men, newspaper people and the officials of the company.

The tests proved satisfactory to the officers, and no difficulty was experienced except where ice was encountered, which interfered to some extent with traction on account of the small tires fitted to the train.

The train consisted of a traction engine, or tractor, as it is termed, and several cars resembling wagons. The tractor is equipped with a three-cylinder four-cycle engine of 7 by 10-inch cylinders and developing 40 horsepower at 400 revolutions, which operates a generator that supplies electricity for a motor on each car and the tractor as well. The cars are connected by means of an ordinary draw-bar, and the wires are connected by means of a plug switch.

The system is something similar to the Sprague, used on elevated roads in some parts of the country. The tractor itself weighs 6 tons, has 6-foot wheel base and 6-foot track, the driving wheels being 36 inches and the steering wheels 32 inches in diameter. Both wheels are fitted with solid rubber tires, the former with 7-inch and the latter with 3½-inch. The cars are driven by a double chain, from a pinion on a countershaft. The cars weigh 2½ tons each, have a 10-foot wheel base and a 10-ton capacity.

After the test had been satisfactorily made the invited guests were given a banquet, at which the subject of heavy powered motors and power commercial vehicles was discussed by several of the officers of the company and the guests. The company reports that it has an order for a similar train from the Pacific Coast Borax Co.

### MOYLA HAS NEW OWNER

The Consolidated Motor Co., of New York, has purchased the Moyla Automobile Co. and will make Moyla touring cars as well as motor boats and business vehicles. The president of the new company will be H. C. Cryder; vice-president, Lowell M. Palmer, Jr.; secretary, Henry U. Palmer. W. H. Owen will be general sales manager.

## UNLIKE DOURDAN ROAD

### Mississippi Valley Tourists Find Roads in Southern and Central Illinois Almost Impassable

A trip from Chicago to St. Louis was made last fall by Mr. and Mrs. G. M. Davidson, of Chicago, in a St. Louis car, and while not filled with hairbreadth escapes or many accidents, it was a pleasurable tour.

It was the original intention of Mr. and Mrs. Davidson to visit their old home in central Ohio, and the start was accordingly toward Indianapolis, Ind., leaving Chicago at noon, the run to Beecher, Ill., was made by 4 o'clock, where they stopped for the night. The roads after leaving the city were good dirt roads, except at a few places where they had recently been worked and were covered with loose dirt and sand. The low gear of the machine, however, carried them safely over the rough places.

From Beecher good progress was made until the party reached the Kankakee river at Mokena. Here trouble commenced. The road suddenly changed from solid dirt to loose, fine sand, which did not contain enough clay to make it pack. After plunging through this for several miles the tourists stopped at a farm house to inquire whether there was any prospect of getting a less sandy road leading toward Indianapolis. The result of the inquiry was not very encouraging, as the farmer told about several hills on the road that were covered with about 10 inches of loose sand. He also told of the troubles of other automobiles that had passed over the road during the summer. Two had broken down and were shipped home by train. One operator, when he found so much sand, had hired a team of horses to assist him, rather than strain his machine endeavoring to make it carry him through by its own power.

Despite the gloomy predictions of the agriculturist, the decision was made to push ahead. Parting on the low gear, the tourists moved slowly along through the sand for several miles and were congratulating themselves that they were moving at all, when suddenly on a short sand hill, something in the gear case let go and the car stopped. An examination showed that a steel pinion of the transmission gear had broken. Inquiring at the nearest farm house, it was found that about 2 miles away, at a French settlement called St. Anne, there was a blacksmith shop. The farmer and his mules were impressed into service to tow the machine to the shop. Here the broken gear was removed and Mr. Davidson went to St. Louis to the factory and secured a new one, returning the following night.

At St. Anne the tourists learned that the roads leading to the east and south had much loose sand on them, but the roads leading to the west were free from sand. Therefore they decided to change the route and go to St. Louis. Taking the road leading directly west for St. Anne, they went to Chelone and from there followed the Illinois central railroad south to Gilman, where they stopped for the night. Upon inquiry, they found that the best roads led west from Gilman 40 miles to Chelone, and directly on the route generally taken by automobilists traveling from Chicago to St. Louis. The next morning the start on this road was made, Chelone being reached at noon. After lunch they started southwest toward Bloomington and were making good progress

over a rutty road, when they had the first and only tire failure of the entire trip. This caused a delay of an hour, as it was necessary to put two patches on the outer casing, and Bloomington was not reached until after dark.

The following morning the machine was thoroughly cleaned, a new tire put on, and the start made toward Lincoln. The roads were rough and badly cut and the sun was under a cloud all the afternoon, so that by 4 o'clock it was nearly dark. It was still 10 miles to Lincoln, and being near a little farming community called Lawndale they decided to stop. At the combination post office and general store the postmaster and proprietor was asked if there was a hotel in the town. He said there was no hotel, but that in addition to his other duties he sometimes took in travelers who were obliged to stay in town over night. His hospitality was accepted and the accommodations found to be excellent. There being no stable or shed in which to house the car, the postmaster made a deal with the engineer of an elevator whereby the car was run on an incline into the second story of the elevator for the night.

The next day the road followed section lines so that the course was continually changing from south to west and from west to south. Early in the afternoon Springfield was reached and the travelers decided to stay there over night. During the night it rained hard, but a new start was made the following morning. As soon as they got off the paved streets into the country the tourists found that the rains had softened the black dirt into a sticky, slippery mass, locally known as gumbo. It was almost impossible to keep the vehicle in the road, as the rear wheels skidded as much as they would have done in grease. After proceeding a short distance through this gumbo it was decided to abandon the trip for the day, so the return was made to Springfield to wait for the gumbo to dry.

The following morning the condition of the road was much improved and the journey to the coal mining town of Stanton was made by 3 o'clock. Here the party was told the roads to St. Louis were excellent, and that the last 10 miles from Collinsville to East St. Louis was a rock road, being part of the old National road from St. Louis to Washington. The road was good as far as Edwardsville, and fair from there to Collinsville. From Collinsville to East St. Louis, however, the tourists found the poorest 10 miles of road they passed over during the entire trip. Instead of rock, it was mud and deep holes every few feet, so that progress was very slow.

The Eads bridge was reached at noon and a few minutes later the final stop of the journey was made at the hotel. The car was in good condition and was now "back to the city of its birth," having traveled over 6,000 miles since the opening of the season.

### FOR CLUTCHES THAT SLIP

A slipping clutch is a source of constant annoyance to the driver, as much of the power developed by the engine is wasted by the clutch slipping instead of its transmitting the power to the road wheels for purposes of propulsion. It will usually be found that the cause of abnormal slipping lies in the fact that the clutch is in such a position as to take up a lot of the oil which is ejected from the crank chamber of the engine or the gear case. If such is the case, the first thing is to find the cause pursued by the oil, and to check it by means of a baffle plate composed of a piece of tin,

# THE BRITISH EDITOR'S POINT OF VIEW

## AUTOMOBILING AND GOOD ROADS

Since the coming of the automobile and the pneumatic-tired bicycle great strides have been taken in improvements as regards road construction and maintenance, though few would hazard an opinion that such improvements are anything but partial in the extreme. Indeed, the invention of the rubber tire gave birth to the necessity for a revolution in road construction and an attempt to make some progress towards perfection of surface. It is not merely in this direction, however, that the automobile is calculated to forward the work of reform on our highways by bringing home to the minds of the community the urgent necessity that exists for it. The report of the departmental committee on highways clearly shows—indeed the report itself states—that the increase of motor car traffic brings about an entirely new set of conditions as regards the manner in which the country's roads must in future be administered and developed.

It is as yet, of course, too early to say to what extent the country's long-distance traffic will return to the roads in consequence of the advantages offered by the motor car, but it can safely be asserted that the increase in the number of self-propelled vehicles covering long distances at a high rate of speed is sure to be very large—much larger, indeed, than is possible at present to guess. Not only passenger cars for pleasure use will throng the roads, but heavier motor wagons for transport purposes of all kinds are in the course of time practically certain to supersede the slow-going horse-drawn vehicles of to-day. It is the necessity for coping with that state of things that makes the reorganization of the national system of road control and administrative development essential. Already it is becoming a matter of the closest personal concern to a very large proportion of the people of this country that the roads, other than those in their immediate vicinity, should be properly built, properly controlled, and such methods of repair adopted as shall insure their being kept at the highest pitch of efficiency. As the motor car is adapted to a wider and ever-widening extent, the need for proper roads will become more and more urgent, and the question of their provision will have an influence of the utmost importance in forwarding or retarding the commercial development of the nation. At present our highways are altogether inadequate, while the fact that control of them is so sectionized, subdivided and split up, makes improvement practically impossible. What is wanted is that our system of highway communication shall be planned, controlled, and developed on scientific lines, so that roads can be made fit to cope with increased facilities for high-speed locomotion. The report of the departmental committee is only one step in this direction, and even if all its recommendations were acted upon by the legislature, reform would still be far from complete. It is, however, a step forward, and the subject can never be allowed to drop back into the position of obscurity it has so long occupied. There is now an opportunity to obtain at least a partial recompense for the efforts that have been put forth, but it will require activity and vigilance, in agitating for legislation on the lines of the report, to obtain it, and to secure for

the advancement of our national prosperity all the benefits which a modern system of international communications would enable us to reap from automobilism in all its forms.—Automobile Club Journal.

## THE PUBLIC AND SPEED TRIALS

No one who witnessed the motor speed trials at Southport, excellent and interesting as they were, can deny that before this meeting is again promoted some thought will have to be taken as to the means by which the various courses among the cars of different classes can be made more spectacularly attractive to the public who come to look on and to be entertained by something in the shape of visible contests. It cannot be denied that the large majority of the heats in all the events except those including the racing cars were more or less of a professional nature. True, the automobiles were competing against each other on the watch, but as the times made by the winning car did not go up on the few boards there were available until some little time after the heats had closed, the public were far from being kept in close touch with what was going on. It needed continual reference to the programme, too, to discover which event was in course of competition. We think it will be agreed that the scheme of prize classification which was adopted and served well enough for the 1,000 miles reliability trials is not at all successful when applied in connection with such speed trials as were carried out at Southport. If the public are to be interested and drawn in their thousands year by year to witness these trials, the public must be afforded some visual entertainment, something in the character of close finishes. That a close finish does excite the keenest regard was evidenced clearly enough at the moment when Jarrott, by supreme judgment, passed Eden on the post, and when Edge and Hutton flew side by side at terrific speed over the finishing mark of the kilometer. The roar of voices which accompanied the cars on their progress up the course, and which lasted for some minutes after they had passed from view, showed clearly how keenly the spectators appreciated something in the shape of a race. Mere speed, though exciting enough in itself, is not sufficient, for speed by itself must nowadays be something abnormal to attract remark. On the Southport course anything under 50 miles per hour looked like crawling, and as the rate of progress of many of the competing cars fell very much below this there were times when things fell very flat indeed. How to avoid this apparent lack of competition remains for those who are most closely connected with the promotion of the Southport speed trials in 1904. There are about them the makings of a great annual meeting which will attract spectators from far and near, but there must be visible competition, and that evidently cannot be provided by such classification of vehicles as obtained last week. Also, those organizing next year's trials will have to devise some fuller and readier means of keeping the watching public acquainted with results, the three hand painted boards in use at Southport being totally inadequate for the purpose. The spectator is not satisfied with what he sees; he wishes to know all about it and should be told.—The Autocar.

## TOURING CAR DEVELOPMENT

Progress is rapid in the automobile world—how rapid only those who are closely in touch with motor manufacturing know. That fact, and the high state of development to which the tourist motor car has attained, are strongly impressed on one by certain new features which have been introduced into the system of making in this year's reliability trials. If anyone had proposed 4 years, or even 2 years ago to penalize competing cars in the trials of vibration, noisiness, dust-raising and the like, he would simply have been laughed to scorn; yet all these factors will have a very important bearing upon the results of this year's tests, while, in addition, finish and appearance and general cleanliness of the motor and gear are also to be largely taken into account. The reason for introducing what may, perhaps, be called minor considerations such as these is not far to seek, nor is the fact that it is not only possible, but absolutely essential, to allow for them difficult to understand. It amounts to this, that the modern motor car has reached a standard of perfection so advanced that in order to differentiate between cars, all of a very high level of excellence, questions of convenience, comfort, and appearance have to be decided upon with the greatest nicety.

Year modern automobilist is the most exacting person in the world where his car is concerned, and he is by no means satisfied unless to good speed qualities, the efficiency and general reliability of mechanism, are added all the qualities which the owner of a smart horse carriage considers essential—style, appearance, and comfort. Manufacturers have already realized this, and during the past two years competition has been very keen among them to produce not only a thoroughly trustworthy car so far as running qualities are concerned, but also a handsome, comfortable, cleanly and well-finished vehicle. It is evidence of a new stage in the progress of automobile construction, and he it said, a department of it which is in some respects quite as important as the primary considerations of engine efficiency and power, strength and rigidity of frame building and all-round reliability. Motor cars must express a certain degree of refinement and elegance as well as the predetermined degree of power.

It does not, however, indicate that the automobile, whether as a pleasure or a commercial vehicle, has attained anything like the fulness of its growth. Far otherwise, indeed; it shows merely that there is a general recognition that all branches of its development must now go hand in hand. The touring motor car of to-day is a conveyance so luxurious that to some it might perhaps seem that little can be done to improve it, but it may safely be asserted that its fellow of, say, a decade hence will be ten times more comfortable and commodious. Indeed, the development of the automobile for touring purposes has far exceeded the most optimistic anticipations of those who aured English automobilism in its early days. What its future progress will be it would be impossible to say, but to judge from the advance made during the past 7 years it will be as great as it will be beneficial in altering English commercial and social life in all its aspects.—Automobile Club Journal.



# MOTOR BOATING

## NEW NAPIER RACER

The new Napier racing motor boat, which is entered for the Monaco races, is fitted with a four-cylinder 45-horsepower gasoline motor, similar to those used in the motor cars of the same make. The racer will be 42 feet long and of 5½ feet beam. One of the features of the racer is that the man who handles the steering wheel is seated behind the motor, which is located at the front end of the pit and thus he has full control of the starting, speed and reversing of the boat. The fuel is kept in a specially built tank, intended to be danger-proof. The exhaust pipe leads to a muffler located in the rear of the boat. Both the stem and the stern of the boat are very narrow; much more so, in fact, than of other racers of the same general dimensions and power.



tumbled home stems add to the appearance of the water line. The propeller wheel is 26 inches in diameter, of three blades and reversible. The rudder swings on a pivot and is operated by either of both side and front steering wheels. The steering cables are fitted with turn buckles for taking up slack. Forward there are six roomy lockers, while there are two more in the rear.

The boat is 30 feet long on the water line and of 5 feet beam. The freeboard is 25½ inches, the draft 7½ inches and the weight of the complete boat is about 1,200 pounds. The displacement is about 1,400 pounds and the seating capacity fourteen to eighteen. The power plant comprises a regular Thomas "Flyer" automobile engine, of three cylinders and developing 24 horsepower. This motor was described recently in *MOTOR AGE* in connection with a description of the Thomas car.

## MATCH RACE CONDITIONS

In the match race for automobile boats arranged by Hollander & Tangeman and Smith & Mabley for a cup valued at \$2,000, the conditions have been agreed upon as follows:

Over all length of boats to be not over 45 feet and not under 30 feet. Each boat must contain at least two persons when racing. Boats may be raced with or without mufflers.

The \$2,000 trophy shall be won by the boat winning two races out of three. The course shall be triangular and 30 miles in length. The date of the race shall be between May 1 and June 1, the exact date to be settled before April 15.

Both boats must be equipped with reversing gear and two life preservers. Each boat must contain in its tank at least 25 gallons of gasoline on crossing the starting line.

The match to be held in conformity with rules regarding time allowance, to be mutually agreed upon by both sides, and this with the intention and desire of testing said rules as regards their fitness for future contests for the trophy.

## A FAST BRITISHER

The Durodonal is an English gasoline racing boat that figured prominently in races last season. It was designed by Wort & Beadle, of Cowes, England, and was built for Frank E. Beadle, especially to compete in the Harmsworth cup race.

The boat is 30 feet long, of 5 feet 10-inch beam, depth 2 feet 4 inches; draft, including propeller, 22 inches, and is equipped with a 50-horsepower motor; yet it weighs complete less than 2,000 pounds. It is said that in trial spins the boat has developed 19 and 19½ knots an hour. The hull is of veneer construction, being made of three layers of mahogany, secured with copper wire, and without frame timbers of any kind. The motor is composed of two four-cylinder M. M. C. motors, placed in line longitudinally of the boat and with their respective shafts coupled by a universal joint. It is set 12 feet from the stem. The crank casings, which are of aluminum, are supported by side arms after the fashion of an upright automobile motor mounting.

In the ignition system a single trembler is used in connection with eight coils, a low tension commutator connecting it consecutively with each of the eight cylinders. There is a reserve trembler on the coil box, which may be switched in at will to alternate with the other. There is no muffler, the exhaust pipe being led alongside the boat to the stern. While there is more noise than would be desirable in the case of a strictly pleasure launch, the rapidity of the impulses of the eight cylinders prevents an excessively disagreeable exhaust. The propeller shaft projects about 5 feet into the water at the rear, and carries two propellers, the forward of which is 14, and the rear of which is 18 inches in diameter. There are two blades on each propeller, set at 90 degrees to each other. There is no reversing gear; but the rudder is at the very rear of the boat and is quite small, and allows the turning of the boat within a short space.

This boat, slightly changed, will be entered in next summer's races in English and continental waters.

## POWER BOAT NOTES

The French use the word *automatique* for motor boat racing.

Marine motor builders have adopted the automobile idea of casting the cylinder and head in one piece, instead of making the latter detachable.

A launch that a few years ago made Chicago its port was recently confiscated by government officers at New Orleans on the ground that it was engaged in contraband work.

A number of steam yacht races have been scheduled for the coming summer in and about New York bay. Kanawha will defend the title to the Lystratoro cup against F. M. Smith's Haonli. Mr. Smith has offered two cups and the Telford cup will also be sought from Normana.

The ordinary launch light will not suffice for the Mississippi and Ohio rivers. The requirements are for a red port light and green starboard light which can be seen from both astern and when approaching head on. Ordinary colored lanterns are usually hung amid-ship.

## FRENCH EXPORTS

During the first ten months of 1903 the French export trade amounted to \$8,769,800, as against \$5,310,200 for the corresponding period in 1902 and \$2,682,800 in 1901. The importation of automobiles during 10 months shows a value of \$191,800 for last year, \$156,000 for 1902 and \$103,200 for 1901. The motor cycle trade shows a decided decline, the export during 10 months of 1903 amounting to \$82,800, as against \$99,800 during the corresponding period in 1902. The importation of these machines also increased in value for 10 months being \$2,800 in 1903 and only \$1,800 in 1902.



MOTOR AGE

THE DURODONAL

## THE THOMAS "FLYER"

Before E. R. Thomas entered the automobile trade he was in the bicycle trade, and before he was in the bicycle trade he was in the boat business. He has now gone back to first principles, by adding to the business of the E. R. Thomas Motor Co., of Buffalo, N. Y., the manufacture of light, fast power boats, so-called automobile boats for want of a more expressive term.

The company is constructing several boats which are not freakish, but which are intended for roomy speed launches, a cross between the strictly racing boat of no other utility, and the slowly laboring ordinary motor launch of pleasure usefulness. The boat is fast, being designed to go 17 or 18 miles an hour, but in the drawing of the lines seaworthiness has not been sacrificed.

The boat has a needle point bow and a very wide stern, the widest section of water line being at the stern. The whole boat, however, is wider on the water line than on the deck. The hull is strong, with frames running from deck to deck, and with two bilge clamps running the full length of the boat. Three-inch

# THE READERS' CLEARING HOUSE

## COMPRESSION SPACE

Hartford, Conn.—Editor MOTOR AGE—What is the average width of the water jacket space of an automobile motor? Is there any rule governing this space?

How is the compression space of a motor determined? Is it dependent upon the bore and stroke of the motor, or is there a fixed rule? Does the size of the compression space vary in different engines of the same power?

Is a mechanical inlet valve better than an automatic inlet valve, and if so, why? How far does the piston descend on the admission stroke, before the automatic valve opens? Does the valve close immediately at the end of the stroke, or after the piston has started upward on the compression stroke?

Which will give the greatest speed in the case of a motor cycle motor, a carburetor or a vaporizer? Which will give the best service in all-around use, including touring and racing?

Is turning the exhaust into the frame tube good practice, or should a muffler be used? Does an exhaust pipe of many turns cut down the engine power?—J. J. O'CONNOR.

The average water jacket spaces are from  $\frac{1}{2}$  to  $\frac{3}{4}$ -inch wide. There is no specific rule governing this space. Enough water must be circulated around the cylinder to keep it sufficiently cool, and at the same time it is not desirable to make the whole cylinder casting unnecessarily large and bulky. Some designers use the rule of making the water jacket with one-tenth the diameter of the cylinder; other designers make a more liberal allowance.

The determination of the compression space mathematically implies the use of complicated formulas.

Letting C equal the compression space in terms of the cylinder length; E equal the stroke; D equal C<sup>2</sup>-8; and P the pressure of compression; one formula is: D equals 8 divided by 1-(7.507 divided by the square root of P times the square root of C). C would, of course, then be found by subtracting 8 from D. By using 80 pounds as the pressure of compression, this formula would reduce to, D=8, divided by .7193. Roughly, then, the compression space would be from 30 to 40 per cent of the stroke. The compression space in all motors of the same horsepower is not the same.

There is a division of opinion in the matter of the mechanically and atmospherically operated inlet valve. The former insures a quick positive action, but adds complication, and is not as sensitive in adapting its action to various speeds, especially to high speeds. This question was discussed at greater length in MOTOR AGE several months ago. The time of opening and closing of the atmospheric inlet valve depends entirely upon the tension of the spring and the engine speed. In ordinary practice the valve lags slightly behind the end of the piston strokes in opening and closing.

Most motor cycle builders have adopted the popular form of float feed spray carburetor as more suitable for general use than either the Lankensheimer style of mixing valve or the old style of surface carburetor.

The use of a frame tube for a muffler is all right as far as muffling the sound goes, so long as it is arranged to possess the necessary qualities of a separate muffler. The principal

disadvantage is the weakening effect upon the frame of subjecting one of its members to constant heat.

If turns in the exhaust pipe are sharp they will create a certain amount of back pressure. If they are gradual they will have no perceptible effect upon the efficiency of the motor.

## TWO-CYCLE MOTOR POINTS

Niles, Mich.—Editor MOTOR AGE—I am contemplating building a two-cycle motor of 4-inch bore and  $6\frac{1}{4}$ -inch stroke. The exhaust port will be at the bottom of the stroke, and will be  $1\frac{1}{2}$  inches in diameter. The piston will, accordingly, receive the benefit of the impulse for 5 inches of its stroke, before the beginning of the uncovering of the exhaust port. The crank case will be large. The inlet pipe and valve will be  $1\frac{1}{2}$  inches in diameter. The explosive mixture will be admitted to the cylinder at the top, which will avoid the use of a baffle plate or deflector.

It has been my experience with two-cycle launch motors that the mixture is fired at a low compression. In one instance I found that the compression space between the piston and cylinder head was equal to the stroke of the engine piston. Is an engine so constructed more economical in fuel consumption than one with a smaller compression space? If a two-cycle motor runs more economically with the large compression space, would it not be a good plan to attach a small pump to the crank case and connected with the carburetor to assist in supplying the crank case with the fuel from the carburetor? On the upward stroke of the piston both the crank case and the pump would receive a charge and on the admission stroke a full charge of fuel would be taken into the cylinder. What should be the pressure in such a motor, and what would be the space between the piston and the cylinder head? Running at 900 revolutions per minute, what would be the horsepower?—J. DELAC.

It is not clear from the letter just how the pump is meant to operate. Two-cycle motors have been built, in which there are two cylinders, one used as an impulse cylinder and the other as a compression cylinder. It is ordinarily claimed that a two-cycle motor can not have over 30 or 40 pounds compression pressure, but advocates of this type of motor say that the compression may be carried just as far as in a four-cycle engine. The clearance space in the 4 by  $6\frac{1}{4}$ -inch two-cycle motor would be about 2 inches. At 900 revolutions per minute a two-cycle motor of this size would develop about 7 horsepower.

## DRIVING SPEED RATIOS

Canton, Ill.—Editor MOTOR AGE—I have a steam runabout running gear and body and wish to equip it with a Friedman double opposed, horizontal motor, which is rated at 6-horsepower at 1,600 revolutions per minute. The differential on the rear axle of the running gear has a forty-tooth sprocket and is in the center of the axle. What number of teeth should there be on the transmission gear sprocket to give a running speed of 30 miles an hour on the direct drive? The transmission gear will be on a counter-shaft, as the running gear frame is not wide enough to

permit placing the gear in line with a cross motor shaft, and still keep its driving sprocket in line with the sprocket on the differential gear. How should the motor be mounted? If the rear sprocket were of thirty teeth, how many teeth should the front one have to attain the same speed as in the previous case?—P. W. MATTHIESSEN.

Presuming the wheels to be 30 inches in diameter and the speed of the counter shaft the same as that of the motor on the high speed or direct drive, a fifteen-tooth driving sprocket would give a running speed of 30 miles an hour in connection with a forty-tooth rear sprocket, and a motor speed of 900 revolutions. With a thirty-tooth rear sprocket as eleven-tooth front sprocket would give the same result. Probably the most convenient method of mounting the motor would be to place it in front under a bonnet and drive back to the transmission gear with a chain, the transmission gear being so disposed on its counter shaft that its final drive sprocket would line with the differential sprocket.

## CALCIUM CHLORIDE IN VALVES

Cleveland, O.—During the first cold spell the water jackets on the cylinder heads of the motor of my automobile were cracked. The motor is of the double opposed cylinder pattern with the heads cast integrally with the cylinders. The cracks were cemented, but soon after the beginning of the use of calcium chloride as an anti-freezing solution, water was noticed to escape into the combustion chamber. The motor ran well enough for a few days, but soon became so weak that it would not run when the car was on the high speed gear, being able to pull the load only when the low gear was used. I removed the valves and found both inlets encrusted with calcium chloride. The leak into the combustion chamber is minute, creating nothing more than a mere dampness, but the calcium deposits so heavily on the valves that they do not seat properly, and hence the compression is extremely low. (Can you suggest a remedy?—E. RIEMENSCHNEIDER.

If it is desired to continue the use of an anti-freezing mixture, use a solution of 20 or 25 per cent glycerine in water, instead of the calcium chloride solution.

## WEEL THEY BROKEN

Hartford, Conn.—Editor MOTOR AGE—Recently I experienced a queer accident with a motor cycle. I started from here for New Britain with the machine in good order and running splendidly, and made the 10 miles in good shape, including the climbing of a 25 per cent grade without trouble. In fact I do not believe the motor missed an impulse during the whole of the fast running trip. On the return trip, however, when the motor was running well, it suddenly stopped. As soon as the machine slowed down I jumped off and examined the motor. There was absolutely no compression. I started to roll the machine off the road that I might examine the valves; when the rear wheel suddenly struck, and I found, to my surprise, that the compression was again all right. I started on and managed to get home with the assistance of a little peddling, for while the machine would run all right on the level it would not take over the slightest grades. Also, when riding fast, the motor would suddenly stop, and then again pick up and go on. After I reached home the machine would not run at all. The next day the cylinder and head were taken off and

three piston rings were found to be broken, all in the same place. The points of broken pieces were blued, as though they had been very hot. How could these rings have been broken? Do the piston rings turn in the grooves when the engine is running?—J. J. O'CONNOR.

It is possible that the correspondent mistakes the usual joint in the piston ring for a break, the fact of the breaks all being in the same place suggesting this. In such event the loss of compression would be simply due to the fact that the rings work around in their grooves until all the slots are in line, forming a gas passage. The rings should be turned around and if they refuse to stay in proper position may be pinned.

#### MOTOR OVERHEATING

Waynesburg, Pa.—Editor MOTOR AGE—I have a gasoline car with a 4-horsepower motor. The motor overheats rapidly and the water evaporates quickly. The circulation seems good, as the water runs freely from the pump and radiator when the valves are open. Other cars of the same make are in use here, and they use up but very little water. How can this overheating be obviated?—G. E. H.

If the circulation is all right and other cars of duplicate construction are efficiently cooled it would be almost impossible to point out the difficulty without further information. It is possible that mineral matter has been thickly deposited upon the hot surfaces inside the water jacket and thereby has formed a cake which is a non-heat-conducting surface. Occasionally over heating results from the use of a too rich mixture in the cylinder. Poor lubrication also tends toward overheating.

#### INCREASING MOTOR POWER

East Liverpool, O.—Editor MOTOR AGE—I have a 3½-horsepower motor on a runabout. It does not develop quite enough power to be satisfactory. The bore is 3¼ inches and the stroke 3½ inches. The cylinder wall is 3-16 inch thick and will consequently not stand much boring. Would it be practicable to put in a longer shaft, extending enough beyond the crank case to permit of the attachment of an outside fly wheel in place of the inside fly wheels now used? If so, how much additional power would be obtained?—W. R.

It would not be worth while to change the fly wheel. Perhaps the motor will stand a higher compression. This may be obtained by screwing a plate of aluminum, say ¼-inch thick, and slightly less in diameter than the piston, to the top of the piston.

#### SELECTION OF MOTOR

Boston, Mass.—Editor MOTOR AGE—Which tends toward the most comfort in riding, a single or a double-cylinder motor? Should the motor be horizontal or vertical? On a double cylinder motor what should be the relation of the cranks and impulse strokes to each other? What should be the bore and stroke in each case, with a presumed piston speed of 600 feet per minute, to give a carriage speed of 18 to 20 miles an hour, carrying four passengers?—O. W. C.

There is no fixity of opinion in the question of number and kind of cylinders. Popular taste seems to be in favor of the two-cylinder motor. Each form has advantages and disadvantages. It is a matter of selection of good and weak points. The common arrangement of a double-cylinder vertical motor is with the cranks at 180 degrees and with the impulses following each other, that is, first at

one-half revolution and then at one and one-half revolution apart. A four passenger light car should have a motor of about 8 horsepower at least, which at a piston speed of 600 revolutions per minute would be of 3¼-inch bore and 4½-inch stroke if of two cylinders and run at 1000 revolutions per minute.

#### MIXING VALVES

Kewaupee, Wis.—Editor MOTOR AGE—Will you please furnish me with the addresses of parties making generator valves and carbureters for use on two-cycle marine engines, the mixer having a valve to sustain the back pressure of the compression within the motor crank case. I do not wish to follow the usual custom of placing a valve between the carburetor and the motor, as I wish to place the carburetor very close to the inlet port on the crank chamber.—F. J. DIERHARDER.

A mixing valve of the Lauenheimer type and equipped with a check valve can probably be secured of some builder of marine engines.

#### MAINTENANCE COST

Rhinebeck, N. Y.—Editor MOTOR AGE—Concerning the cost of maintaining a first-class automobile my experience in handling a Mercedes belonging to Col. J. J. Astor may be of interest. The car was delivered in September, 1902, and has since then been continually under my care. It has run 8,000 miles. The total bill for duplicate parts and repairs has been \$23.25. Of this amount \$17 was for repairs after a slight accident. Tire replacements are not included, of course, in this bill of expense. I am now overhauling the car thoroughly, and think that an expense of about \$100 will make the chassis as good as new.—R. MORGAN.

#### ENCASED FLY WHEELS

Denver, Colo.—Editor MOTOR AGE—I am about to build a 4 by 4-inch bicycle motor with the fly wheels encased in the crank box. What is the smallest size and weight of fly wheel that can be run with satisfactory results. The motor will run at 900 revolutions per minute.—H. A. SATTERFIELD.

The fly wheels should not be less than 8 inches in diameter and should weigh at least 25 pounds.

#### TO "SPRING ON" A FRIEND

Lonsdale, R. I.—Editor MOTOR AGE—For those of the readers of the "Clearing House" who are interested in such absorbing problems as "How old is Ann?" I suggest the following question: Two automobiles start simultaneously toward each other, one from New York and the other from Boston; the car from Boston travels at 20 miles an hour, while that from New York goes at 30 miles an hour. When they meet, which one is nearest New York?—G. W. PROWSE.

#### COMFORTABLE ROAD CARS

Santa Paula, Cal.—Editor MOTOR AGE—I have read much of French machines, but am of the opinion that, regardless of the supposed excellence of the foreign cars, American builders should break away from French design and build cars essentially American, and especially intended for rough use on American roads. Particularly should cars have long wheel base, large wheels and a tonneau well forward of the rear axle. A short wheel base with the tonneau back of the rear axle is the height of folly for road use. I have been over many years in this line, and unless the 1904 vintage produces something especially to

my liking, intend to have a touring car made to order. It will have a wheel base of at least 10 feet.—L. B. BLOQUE.

#### AXLE DIAMETERS

Chicago—Editor MOTOR AGE—What size should be the axles of a car weighing between 2,000 and 2,200 pounds, and intended to carry five persons? Is a 1½-inch rear and a 1¾-inch front axle heavy enough to safely carry the load?—H. M. E.

The axles specified would serve, but the safer plan would be to use 1½-inch rear and 1½-inch front axles. The size of the front axle depends somewhat upon the disposition of the motor.

#### POWER OF MOTOR

Wilkesbarre, Pa.—Editor MOTOR AGE—I am building four three-cylinder gasoline motors of 3-inch bore and stroke, to run about 1,500 revolutions per minute. What should be the size of the compression space and what horsepower will one of these motors develop?—John H. Fullmer.

The compression space in terms of cylinder length would be 1 inch. The three-cylinder motor will develop about 8 horsepower.

#### CYLINDER WALL

Green, Ia.—Editor MOTOR AGE—Of what thickness should the walls of an air-cooled motor of 3½-inch bore and 4-inch stroke be?—C. E. 8.

The thickness of such a wall is controlled principally by the restriction of casting. It should be about 3-16 of an inch thick.

#### RELATIVE FLY WHEEL WEIGHTS

Grove City, O.—Editor MOTOR AGE—In the case of four and two-cycle motors of the same bore, stroke, speed and compression, what would be the relative weights of the respective fly wheels?—S. R. Allen.

The fly wheel for the four-cycle motor would be twice as heavy as that of the two-cycle motor.

#### WEIGHT OF FLY WHEEL

Hebron, Neb.—Editor MOTOR AGE—What diameter and rim weight of fly wheel should be used with a motor of 6-inch bore and 8-inch stroke, running about 500 revolutions per minute? What should be the sizes of the inlet and exhaust valves.—W. Heinzer.

The fly wheel should be 22 inches in diameter and with a rim weight of about 350 pounds.

#### CHEAPER THAN WALKING

The trip of the York party from Minneapolis to Portland, Me., in a Packard is now an old story, but the record of its expenditures and broken parts is of some interest even now. As compiled by Jack Elliott, the chauffeur who drove the car on the long journey, the total expense bill for repairs on the trip reached the enormous sum of \$210.

This remarkable total was obtained as follows: One broken spring, working, 85 cents; two new leaves, \$1; one bolt, 5 cents; cutting thread for new screw on vibrator, 10 cents.

The engine consumed during the entire trip 163 gallons of gasoline, which varied in price from 18 cents to 35 cents, reaching the latter figure in Canada. Mr. Elliott used cylinder oil with a prodigious laud, and to this fact he attributes to a large extent the uneventful journey. In all 17 gallons of cylinder oil and 10 pounds of hard oil were used.

## FROM THE 4 WINDS



THE GRAY WOLF, ITS CREW AND ADMIRER ON THE FLORIDA BEACH

The council of Springfield, Ill., has passed an ordinance decreasing the automobile license from \$5 to \$2 a year.

The Russell Motor Vehicle Co. has purchased the plant of the Snelzer Woolen Mills Co. at Cleveland, O., and will manufacture a line of automobiles.

The ten members of the Brattleboro, Vt., Automobile Club entertained the Vermont Automobile Club with a banquet and smoke talk last Monday evening.

The stands of the Mors, Mercedes and Charon, Girardot & Voigt companies were awarded the gold medals at the Paris salon for the elegance of display.

The Albion Engine & Motor Co., of Albion, Mich., has been absorbed by the Jackson Engine & Motor Co., and the men and machinery will be transferred to Jackson.

The French provincial automobile clubs have formed a federation, which will be represented and have a voice in all the committee meetings of the Automobile Club of France.

An anonymous writer in a German daily urges the German government to increase the tax on automobiles to \$75, regardless of the horsepower, the price of the car or any other consideration.

In anticipation of a large, complete catalogue which will be issued in February, Charles E. Miller, 97 Broado street, New York, has sent out a small special catalogue showing some of his leading specialties.

The Peoria Automobile Co. has been incorporated at Peoria, Ill., and about March 1 will open a salesroom and garage on Hamilton boulevard. C. L. Turner has been appointed superintendent of the company.

The British manufacturers and the Automobile Club of Great Britain have again communicated with the Belgian Automobile Club with view to running the British trial race over the circuit des Ardennes course.

An automobile club was organized at Circleville, O., this month with the following officers: President, Dr. D. V. Courtwright; vice-president, H. W. Crites; secretary, Dr. George Heffner, and treasurer, C. L. Boyer.

The automobile tourists who have traveled to out-of-the-way and hitherto unknown spots in the past 3 years have demonstrated that the automobile is practicable for use anywhere that a horse and wagon can go with safety.

A postal service by automobile was formally inaugurated the first of January between Rome, Merlupo and Rignano, Italy. Besides carrying the mails, the service will be arranged to accommodate ten passengers on each run.

At a recent meeting of the Motor Cycle Club of France it was decided that at every meeting a few minutes would be spent in technical demonstrations of the construction and operation of the various parts of motor cycles.

The St. Louis, Mo., Motorcycle Club has requested that a bill be introduced in the council of that city providing for the payment of a license of \$2 a year upon motor cycles, motor tri-cycles, velocipedes and motor bicycles of all kinds.

The German automobile trade, in general, seems to be prosperous. A number of companies have declared dividends varying from 6 to 20 per cent. The Continental-Cautouché & Guttpercha Co. heads the list with a dividend of 50 per cent.

Auto-Life is the title of a new monthly automobile publication just started in Philadelphia, with A. H. Chadbourne as editor. The paper will endeavor to cover the automobile field in Pennsylvania, Delaware, Maryland, Washington, D. C., and southern New Jersey.

The meaning of the word reliability given by the London, England, Times, is that "in automobiles it denotes, roughly speaking, the staying power of a motor car when it is subjected to usage it would never receive at the hands of its owner in any ordinary circumstances."

The Austrian war ministry has sent a letter to the Austrian Automobile Club stating it is in need of officers and men to perform staff and messenger duty in the army. These men must have motor cars or motor cycles, and will be given generous remuneration and expenses.

The third annual show given by the Automobile Club of Philadelphia and the Automobile Dealers' Association of Philadelphia, will be held in the Second Regiment Armory in that

city, January 25 to 30. The show will be under the management of H. Walter Schleicher and H. D. Le Cato.

The new British motor car law demands rigid investigation to discover whether the car is painted a certain color, and other questions of like vital import to the safety of the public, but it entirely neglects to inquire if the driver is blind, or has any legs or arms to properly handle the car.

The Montreal & South Shore Auto Car Co., of Montreal, Canada, will begin an automobile service between Victoria Square and St. Lambert the first of March. The automobiles will each carry twenty-two passengers and will be of 20 horsepower. The officers of the company are: R. T. Willett, president; Peter Lyall, vice-president.

In the 1903 reliability trials in England there were fifty-five English cars entered and forty-eight foreign cars. Twenty-one English cars, or 38.18 per cent, and nineteen foreign cars, or 39.55 per cent, received more than 8,480 marks. Medals were awarded to nine English and nine foreign cars, or 16.36 per cent of the former, and 18.75 per cent of the latter.

The trial spins of one of the new Napier cars which is to be entered in the eliminating trials for the Gordon Bennett cup race proved so satisfactory that one of the English journals ventured to spring a new and original joke. It said that the speed was so great that it needed two men to describe the pace, one to say "Here she is," and the other "There she goes."

The tendency of the Americans to drop the word automobile and substitute motor in its stead has become so pronounced that even the English papers have noticed it and commented favorably on the change. It is also rumored that we are soon to begin using petrol in the place of gasoline, and take our cars up to the third floor repair shop on a "bloomin' lift, y' know."

The Automobile Club of Great Britain and Ireland had about 100 members in 1894. By the end of the following year the membership had grown to about 500; in 1900 there were a little over 700 members, and 400 were added to the list in 1901. The most remarkable increase occurred during the year 1902, when 1,082 new members were admitted. At the end of last year the club had 2,550 members.

The Brooklyn, N. Y., Automobile Co. at its annual stockholders' meeting at the New York office elected the following board of directors: J. Hunt Smith, John H. Vanderveer, L. R. Adams and L. A. Hopkins. L. A. Hopkins was elected president and treasurer and John H. Vanderveer vice-president. This company will have the exclusive eastern control of the Haynes-Apenson output, and may also take on some other line.

Horace B. Day and Robert H. Brodust, formerly of the Cadillac Co. of New York, have formed a partnership under the name of Horace B. Day & Co., and will sell the Webber and Queen cars in Greater New York, Westchester county and Long Island. As soon as improvements now in progress are completed the company will be located at 60 West Forty-third street, New York. Temporary quarters are now established at 220 West Thirty-sixth street.

The main factory of the Mercedes company in Wurttemberg, Germany, employs about 1,000 hands and 120 officials. The branch factory at Marienfeld, a suburb of Berlin, employs about 800 men and officials, and the one in Vienna, about 400 men and officials. There is also a branch in England and one in Milan and repair shops at Puteaux, near Paris. The new works at Unterturkheim is situated on a tract of 25 acres.

◆◆◆

Among the many Frenchmen who have been decorated recently by the French government there are several who belong to the automobile trade. Charles F. Chapelle, vice president of the French Automobile and Cycle Board of Trade, was made an officer of public instruction, while G. M. L. Boadis, manager of the Clarron, Girardot & Voigt Co., P. Peugeot and P. A. Darraeq were named officers of the academy. M. Darraeq was also recently made a knight of the Legion of Honor.

◆◆◆

Several French trade papers suggest that the French Gordon Bennett eliminating trials be held over the circuit des Ardennes route, in Belgium, claiming that this course is in a certain degree similar to the Homburg course, on account of its several difficult sections, its hilly nature and its turns. The opinion among makers is also somewhat in favor of the Ardennes course. They say it would be a mistake to hold the trial races over a good course which does not offer the difficulties presented by the German road.

◆◆◆

Writing from Telschhuano, Chili, South America, a correspondent says that in the southern part of Chili an automobile is unknown and that not more than one out of 50,000 inhabitants has ever seen one. In general the roads are so bad that to travel with even a bicycle it is necessary to ride through the fields. There are one or two motor cars in Santiago, which has 200,000 inhabitants. One of the cars belongs to Mr. Besa, the Chilean prime minister. Valparaiso, which is the second largest city of Chili, has an automobile which was donated to the fire department of the town. Thus, there are only three automobiles in that country, which has a population of 2,500,000.

◆◆◆

General Gallieni, governor of the Isle of Madagascar, a French colony, states that the use of automobiles in that country is becoming very general. In June, 1900, when the governor returned to Madagascar, he took with him two 12-horsepower and one 6-horsepower Panhard cars, these being the first automobiles imported into the island. The cars were used constantly, one by the governor in all his travels. In less than a year and a half over 21,800 miles were traveled in the three cars. At the time the automobiles were landed the roads were no better than those of darkest Africa, but the governor set about making existing roads rideable and began to build new ones. Ever since there has been a special good roads committee, and the governor claims that anyone who visited Madagascar would be astonished to see the remarkable improvements accomplished.

◆◆◆

About 100 automobilists accepted the invitation of the E. R. Thomas Motor Co. to listen to a lecture given by Fred Nebraska at the factory in Buffalo, N. Y., on the evening of January 11. The new Thomas was chosen as the subject for illustration and lantern slides were used to show the interior parts of all



WILLIAM HALL

MOTORING IN MADAGASCAR

bearings, steering gear, front and rear axles, transmission, motor, etc. Attention was drawn to the new sliding gear transmission showing the direct drive on the high speed without a gear in mesh, and the chain pull between bearings whereby the strain is divided equally between both bearings. It was also shown how easily the ordinary mechanic might remove any part without disturbing the alignment of the remaining mechanism of the car.

◆◆◆

The automobile has conquered the earth, the sea and the sky. This achievement may well rank as one of the wonders of the twentieth century. The automobile on land has come into such general use since the beginning of the century that it is almost commonplace. The automobile boat followed soon after and the waters have acknowledged its supremacy. Airships have successfully performed journeys of considerable length, and it has been demonstrated that they are not only possible, but practicable. The French and English are somewhat in advance of America in the matter of airships, but it is safe to venture the assertion that America will be entered in the first international cup race for airships. The new year is pregnant with possibilities, and great strides in the advancement of the motor and the consequent alleviation of the burdens of mankind may confidently be expected.

◆◆◆

Baron Arthur Rothschild, who died in December, was one of the most enthusiastic motorists on the old continent. He had a penchant for fast cars. In 1899 he went to the Nice race meeting, and while going over the La Turbie

road met a director of the Daimler company.

After a few minutes of side by side driving the director started to race. The baron followed and it soon became a contest as to which had the fastest car. The director, who had a new Mercedes machine, reached the end of the road a good distance in advance of the nobleman. The latter immediately offered to buy the faster car and the transaction was concluded in a few minutes. The astute director then returned to Cannstadt, and came back 2 weeks later with another car. He again met the baron and they began talking about the new machine. A trial of speed was arranged and at the finish the baron was far behind. He purchased the car and asked the director to always advise him whenever the company would turn out a faster car. At the time of his death the baron had a fortune in fast automobiles.

◆◆◆

There were displayed at the Salon d'Automobiles, Paris, 488 complete automobiles; 132 classes; 262 motor bicycles and 281 motors. Of the 488 complete vehicles, 459 were pleasure cars and twenty-nine were purely commercial vehicles. Of the passenger vehicles, 408 were gasoline cars, thirty-four electric, eleven steamers, five gasoline and electric combined, and one gasoline and hot air. Of the commercial cars, eighteen were gasoline, six steam and five electric. Of the 408 gasoline cars, 221 had four-cylinder motors, 156 had two-cylinder motors, twenty six had single-cylinder motors, and five had three-cylinder motors. Three of the 132 essais had steam engines, and two had electric motors. All the others had internal combustion motors. Of these, there were seventy-eight of four cylinders, twenty-eight of two cylinders, seventeen of one cylinder, two of three cylinders, and two of six cylinders. The 281 detached motors shown comprised 159 single cylinders, seventy-three four cylinders, forty-four double cylinders, three triple, one six and one eight cylinder. The fact that there were so many single cylinders among the motors exhibited—while usually the four-cylinder patterns are in the majority—is because the greatest number of these motors were made especially for motor cycles. Two hundred and ninety-three of the 488 complete cars were shown with either limousine, coupes or other closed or folding tops.



WILLIAM HALL

A SMALL GERMAN LOCAL CLUB ON A TOUR—THE AUTOMOBILE CLUB OF BRAUNSCHWEIG



# AMERICAN MOTOR LEAGUE

## OFFICERS:

ISAAC B. POTTER, President,  
Potter Building, New York.  
CHARLES E. DURYEA, First Vice-Pres.,  
Reading, Pa.  
W. GRANT MURRAY, Second Vice-Pres.,  
Miami, Fla.  
S. W. MURPHY, Third Vice-Pres.,  
154 Nassau St., New York.  
ROBERT L. STILLSON, Secretary,  
120 Nassau St., New York.  
FREDERICK H. HILL, Treasurer,  
32 Bedford St., Boston.

National Headquarters:  
150 Nassau Street, New York



## CHAIRMEN OF NATIONAL COMMITTEES:

LEGISLATION—George R. Hibbs, New York, N. Y.  
ROAD IMPROVEMENT—E. E. Allen, Lansing, Mich.  
LOCAL ORGANIZATION—Charles F. Potter, Denver, Colo.  
TOURISM—W. H. Baker, Buffalo, N. Y.  
TECHNICALS—Charles F. Duryea, Reading, Pa.  
MEMBERSHIP—Frank A. Loom, New York, N. Y.  
SIGN INDICATIONS—John B. Price, Hamilton, Pa.  
RAVING—A. G. Bartholmer, New York, N. Y.  
PRESS—Joseph Caldwell, Philadelphia, Pa.  
HOTELS—Francis N. Bain, Newburg, N. Y.

## OFFICIAL BULLETIN

### THE AUSPICIOUS MOMENT

The rapid growth of the American Motor League in the last few months has demonstrated that the people are in sympathy with the movement, and as its work and purposes become better known the membership will grow still larger and the influence which it will exert will be far-reaching.

The primary object of the league was to make the motor carriage popular and to dispel public opposition and prejudice against its reasonable use. The first thing to be done was to unite all persons who are friendly to the use of the new vehicle, making an organization that would be national in scope. The national body is subdivided into state divisions, and these divisions are further subdivided into local consults in the various towns. Each local body administers the affairs of the league in its particular locality and thus the country is thoroughly covered.

The league is becoming known to the public at large because of its strenuous efforts in behalf of the good roads movement, and this has appealed more particularly than any other feature of the work because all the people are more or less interested in good roads. A series of sign boards was prepared last fall, showing the proximity of dangerous hills, approaches to villages, etc., and these are being distributed over the country as fast as possible. These signs are not alone of benefit to motorists, but to the general public as well.

The league also provides its members with printed routes, maps and guide books by which touring may be facilitated and encouraged. It has collected a vast amount of data from all the states in the Union and will issue a road book for each state as soon as its membership in the league is large enough to warrant the expense. This work is under the direction of a national touring committee, and committees are being appointed in state divisions. The first book issued contained 146 map pages, including index maps, and showed the important routes in New York, New Jersey, Vermont, Massachusetts, Rhode Island and Connecticut. The routes mapped and described in this book covered a total road distance of over 3,500 miles.

When a local organization is formed a council is appointed to represent it in an active way. When there are several consults in the same place they form a committee or board of consults. These consults supervised the putting up of sign boards and danger signals to warn and guide tourists and travelers in their par-

ticular locality, and they are also to lead and direct the agitation for better roads and streets in the home city. They prepare maps and descriptions of all local routes and send them to the national and state organizations, thus assisting in the work of preparing the books of routes and tours printed for the use of the league at large. The consults also protect the members against the operation of arbitrary, unreasonable, oppressive and unlawful acts, and make such provision for their comfort and social enjoyment as may be deemed proper.

In anticipation of the great number of automobilists who will make the trip to St. Louis this year during the exposition, the league preparing a description of routes from all accessible points east and west from the Atlantic and the Pacific. These routes will be divided into three classes—routes from points east of St. Louis; routes from points west of St. Louis; and branch and miscellaneous routes connecting with the main or through routes. Members of the league can greatly facilitate this work by sending in any information regarding the roads which they have.

Following the gathering of the clans at New York this week comes the meeting at Chicago during the automobile show there. The league expects to awaken by it such a spirit of en-

terprise in the west that the membership in the Mississippi valley will be quadrupled within a few weeks. It can be done. It is up to the members to do it. The members are the league and the league is for the members. Co-operation can make of the league anything that its members want it to be. No plans for the bettering of motoring conditions are too far-reaching if the members ever determine to assume the full value of their strength. Let Chicago mark a great beginning of a great undertaking in the west. There is no more auspicious time than now to write in the unfolding script of good highways the name American Motor League clear across the continent; no better time than now to start the actual forging of a solid chain of co-operating motorists who shall touch the turbulent waters of Hell's Gate and the radiant waves of the Golden Gate.

### LETTERS FROM MEMBERS

Elizabeth, N. J. In clearing the accumulations of weeks past in my library I find the enclosed circular relating to members of the league and a subscription to MOTOR AGE. I am a subscriber to three motor papers, but to add in the cause of good roads and speedy locomotion as compared with the average horse the enclosed check for \$1 is forwarded with a request to have my name added for the "official organ" as a member of the American Motor League—CAPTAIN GEORGE TRICK, Medical Director U. S. Navy.

New Bedford, Mass. I have just received the circular letter issued by the A. M. L. I would be only too glad to join a league with such a beneficial purpose, and you will find my application enclosed. Reluctant to writing as usual, I will say that I will serve in that capacity if you desire it. There is a great amount of work ahead in bringing the automobile into the station it deserves and the sooner the ranks are filled and a united effort put forth, the sooner it will attain that position. I see by the prospectus that you publish a list of official stations. As I am conducting a well lighted and steam heated station with ample storage and repair facilities, I would like the appointment for this city. My motto has always been, "A fair deal or none," and so far I have had no reason to change it. Hope that my membership and services may be of some benefit to the league.—H. K. WILSON.

Brookline, Mass.—I received your recent letter and have just got around to let you know that I will gladly co-operate with you in any way I can to help you out locally or otherwise. You may send me memoranda and any other information you wish. Therefore find enclosed \$2 for dues to the league. I received some time ago a letter from Mr. Ferguson in regard to the league and already had my mind made up to join, and your letter has caused the climax. I think the league is all right and capable of doing some good work. ALFRED A. HOVE.

### THE AMERICAN MOTOR LEAGUE

is an organization to promote the interests of all users of motor vehicles; to ascertain, protect and defend their rights; to oppose and prevent the enactment of any unreasonable and oppressive laws; to encourage the use of motor vehicles by agitation and instruction; to provide its members with printed routes, maps and guide books by which touring may be facilitated and encouraged; to promote the work of improving the public roads and the erection of proper guide boards, and other signs necessary to guide and warn the users of motor vehicles; to select and appoint official hotels, repair shops and supply stations where its members may obtain reliable service at reasonable rates.

### WHO MAY BECOME A MEMBER

"Any man or woman, in years of age or sex, of good moral character and respectable standing, friendly to the motor vehicle and its interests, shall be eligible to membership."

(Constitution, Article 2, Section 1.)

The League is extending its membership in all parts of the country. We invite all friends of the movement to join and aid in building up a powerful organization. No initiation fee. ANNUAL DUES \$2 IN ADVANCE, OR \$3, INCLUDING 1 YEAR'S SUBSCRIPTION TO MOTOR AGE.

# MOTOR AGE

VOL. V. NO. 4

JANUARY 28, 1904

\$2.00 Per Year

## IMPORTANT CHAPTER IN SHOW HISTORY



New York, Jan. 26

—Men have toured horns in many places and for many reasons but no man has ever toured a horn with more real satisfaction than that which accompanied the touring of horns and the ringing of bells last Saturday night at 11 o'clock in Madison Square garden, the closing moment of the fourth annual New York automobile show.

Glad the week of ceaseless effort was over; glad the query, query, query of the interested visitor had ceased; glad the week had brought profit; glad they



had found out they were well up in the lurch in the international race, the American manufacturers who had made the garden a common mart during the week gave their horns an unusually vigorous squeeze, said the last good night and rushed for parking places.

The greatest of all American shows had run its course and by midnight was being hurriedly unrolled into all manner of boxes and crates, to be spread to the four winds. By Sunday noon all that remained of it was a very shabby looking Madison Square garden, and history.

The show ran an even course throughout the whole week. An average daily attendance of 12,000 crowded the aisles afternoon and evening and inspired the frequent repetition of the comment that the automobile show crowd yearly assumes more nearly the proportions and character of a horse show crowd. The New York show crowd is essentially of all American show crowds of the elite. It is spotted with the regalia of the ultra-fashionable and seems upon sight to be a good buying assemblage. Yet sprinkled in it plentifully are dealers from all the eastern states. These move about quietly and more or less cautiously—that is, they do not buy quickly—but they buy in quantities and it is really the purchases of the agents which make the profits of the show.

Estimating the number of cars sold at a show is almost impossible, because definite information cannot be obtained from all exhibitors. From the most satisfactory information obtainable, however, it may be determined that while individuals bought about 400 cars at the show, dealers contracted for 10,000. But by this comparison it must not be judged that the lay visitors are mainly useful in swelling gate receipts. Each one represents a person interested in automobilizing in some manner or other. They do not go to hear the band. Most of them represent probable purchasers of automobiles; probable purchasers in their turn of the 10,000 cars bought by the dealers and which must be sold by them at retail. The show is paid by New Yorkers not so much as a place at

which to buy an automobile as a place at which to study automobiles with a view to the future buying of a car.

The makers, individually, at the close of the show had various comments to make concerning sales, there being the usual division of opinion concerning the selling properties of the show—exhibitors are loath to take into consideration the selling properties of the goods to be sold. On the whole, however, the trade was well satisfied and seemed a unit in calling the exhibition the best commercially as in every other respect of all the American shows of the last 4 years.

Probably half the season's output of the exhibitors was sold or contracted for and several exhibitors claimed to have disposed of their entire output. This is not a new story but it is told with such engaging frankness that a newspaper man can but believe it and pass it along.

As any rate the Americans did not have any trouble in disposing of their big higher priced cars in close competition with the choicest models of European manufacture. True a hundred or so French cars were sold for a lump sum which would have purchased about 250 American cars of corresponding patterns; but there is a slight probability that the sellers of the French cars have in this more to be proud of than have the buyers.

Except out of pure patriotism it would be folly to say that the French display as a whole did not represent a more nearly finished production than the American display as a whole; but it became an uncertain problem at the show to determine whether or not the difference in grade anywhere near equalled the difference in price. Out of fairness one must admire the excellent mechanical work on the French cars, admire such pieces of engineering triumph as the Darracq pressed steel frame.

Yet when one looks further than the walls of a show building and sees cars skimming across a rough country with unmade and unkempt roads the fluency of construction is not so all absorbing as the adaptability of construction to the purpose at hand. Here the American makers shine for Americans. They are probably just as backward in adapting export machines to export conditions as are French makers. They were in the bicycle trade at any rate. The matter of comparative worth of the domestic and foreign machines came up for greater consideration at this show than at any previous one on account of the fact that this was the first at which any great number of American exhibitors had cars in exactly the same classes as those represented by big foreign cars.





Previously a purchaser of a French car bought because he wanted a car the kind of which was not extensively built in this country. This year the show was full of American surprises in handsome limousines, coupes, and other large cars, and the buyer of a foreign car could be put down almost conclusively as believing that he got the best value for his money in making his selection. Hence it must be taken for granted that the French cars shown represented the top notch in current motor car building. Their buyers, however, must have been men able and willing to pay a premium for a shade of difference in merit, for it would be out of the question to conceive of the French cars on the average being in actual merit 150 per cent better than the American cars of the same class.

In addition to the friendly rivalry of the Americans and the foreigners another rivalry in making sales existed that was never before apparent at a New York show. This was the rivalry between the licensed and the unlicensed makers, to use the common expres-

sion—in other words, between the members of the Association of Licensed Automobile Manufacturers and those who are not by membership in that association under the protection of the Selden patent but are instead so-called "infringers." Neither faction used the topic to any great extent in selling cars. The licensed fellows maintained a quiet confidence, while the others kept up a loud but dignified front, and likewise said little. All sold cars. Peace reigned, for all the customer could notice.

In one other commercial aspect was the show different from preceding exhibitions—a great interest was taken in commercial vehicles. More concerns than formerly exhibited cars rigged with bodies for business purposes or cars specially and solely built for such usefulness. More persons than ever hovered around such displays and more sales were made in such lines. The business world has started motorward.

In weather the show was graced with a little sunshine, some extremely cold days and a

whole lot of rain, the latter of every variety from drizzle to downpour. Many of the streets in the neighborhood of the grounds were in abominable condition and the Chicago delegation took pains to call the attention of New Yorkers to this, getting back at them for comments of no complimentary nature which are made about the streets of Chicago at each annual western show. But this condition was only incidental. It proved to have little or no effect upon the attendance and only hindered in the demonstrating carried on outside the garden. It probably helped the sale of limousines and other enclosed todies.

The New York show is gone. The number has been scratched off the program of prominent automobiling events of 1914. Quickly following comes the racing tournament on the Florida beach; then the Chicago show; then the mass of local shows; then an industrious spell of manufacture and delivery—and then all eyes will turn upon the London Bennett international cup race.

## THE SHOW WEEK BANQUETS



### BANQUET OF N. A. A. M. BRILLIANT

Cafe Martin was probably never so jubilant as last Friday night, when 300 of the National Association of Automobile Manufacturers occupied the fifty tables in its handsome banquet hall. It was the occasion of the third annual banquet of the association and it was the most enthusiastic of all. The hall is not as large as some, but it is high and brilliant in lighting and decoration. From the broad balcony a good orchestra and a good quartet emitted a continual torrent of popular and classical music, while below the joyous manufacturers emptied a continual torrent of popular and classical beverage upon each other. There was no chance for a ghost to creep in upon the scene.

The French dinner was good and even those who were not metropolitan enough in their tastes to relish the butter, spread salt upon it and found that it did very well. The service was a little slow, but it gave the importers time to join heartily in singing several well known choruses, including the Percy Owen specialty "In the Good Old Samur Time," led by that dignitary with as much vim as when he made the song famous at Bridgeport during the endurance run of 1902.

The first of the after-dinner speakers was Milton J. Bullong, president of the association. His address was a brief, consistent history of the association and an outline of the work it had done and was doing. His eloquence lay in facts. Especial stress was laid

upon the practical form of all of the association's undertakings and upon the success that had attended them throughout, even in the endurance run—disappointing in many ways, but of itself the greatest demonstration ever made of the excellence of American automobiles. A word or two mapped the work of the association in connection with the St. Louis world's fair, at which the association had arranged for the making of a joint display of the vehicles manufactured by its members, this exhibit to occupy the major portion of the space allotted to automobiles.

Townmaster Charles Thaddeus Terry, counsel for the association, rambled into classical and other literature in an introductory address eulogizing American automobiles, the American trade and the N. A. A. M. He told several yarns of the bench and police court—all with motor car morals—and from a retentive memory brought forth poetry with which he wove laurel leaves around the industry.

Professor Frederick R. Hutton, of Columbia University, made the bit of the occasion. He spoke on automobile ideals and so interwove common sense with a dry characteristic humor that he quite captivated the bunch. Most prominent among the numerous ideals of which

he mentioned was the ideal terminology, as he did not hesitate in saying that the proper automobile usage was far from ideal. He discussed the word automobile of being an essentially cross breed, half Latin, half Greek in its derivation, and expressed a further objection for such borrowed words as chassis, garage and chassis. But he did not criticize without suggestion and in tearing down the word system of the trade offered to build up a new one on a pure Latin foundation—a simple one which could be adapted to almost every use of expression. The root from which the galaxy of ideal words may be built is pell and from it may be obtained the words: *pell*, to mean the automobile; *pell*, the owner of the car; *pell*, the driver of the car; *pell*, the innocent passenger in the car; *pell*, the act of riding about in the car; *dispell*, the act of hitting a dog when riding about in the car; *pellery*, a garage or other place in which to keep motor cars; *pelline*, the chassis or running gear of the car.

Colonel Albert A. Pope spoke extravagantly but with his usual enthusiasm, and to subject being "Wheels Versus the Horse." He had ample opportunity to spread himself over the possibilities of the rest of this and the whole of the next generation, with a few little dashes into the realm of present accomplishment. The colonel did not treat the wheel as a competitor of the horse; he treated it as a successor to the horse and spoke of the day when the horse shall be driven from out of

streets and the willing motor made to do his work. Then, declared he, would the industry represented by the association giving the banquet become greater than all expectation. Forgetting the A. L. A. M., of which he is a member, and the purpose for which it stands, the enthusiastic veteran in wheel building, launched the statement that there were now in the country 4,000 factories building carriages and wagons, that there were approximately 100 automobile manufacturers actually selling their products in the regular market, and that these 100 motor car makers must grow in number and size to supersede in the business of the 4,000 carriage makers they would wipe out of existence. The colonel with his characteristic assurance of manner, also declared that although the American automobile might not now be the equal of the French product in every sense, it would be but a short time—a year or two—when the American car would be not only the equal but the peer of all the cars of the world.

The concluding speakers were William H. Hotchkiss and Julius M. Mayer, the former having for his topic, "Automobilists and the Law," and the latter, "Automobiles as Viewed from the Bench." Both talks were bright and interesting and presented fair-minded legal views.

#### COLONEL POPE'S DINNER

An informal luncheon was given at the Union League Club Monday noon by Colonel Albert A. Pope, president of the Pope Mfg. Co., to about fifty of his associates in the bicycle and automobile industries. The guests were: Albert L. Pope, George Pope, Paul Walton, Robert L. Wrinkley, Nathaniel C. Fowler, Robert M. Beck, James S. Marvin, Arthur L. Patrick, H. C. Hall, C. E. Walker, Wilbur E. Walker, Harold L. Pope, Ned Lawrence, H. A. Leinhardt, J. F. Cox, P. C. Gilbert, H. H. Rice, Elliott Mason, W. J. Foss, W. E. Eldredge, B. D. Gordan, H. H. Fulton, George C. Russell, E. E. Hissman, A. L. Atkins, A. E. Schaaf, H. S. Leyman, James Mannaghatt, W. C. Johnson, A. L. Garford, W. L. Colt, Haydon Eames, C. E. Hadley, A. O. Smith, W. W. Austin, C. M. Wainwright, Arthur W. Pope, E. W. Pope, William A. Redding, M. V. Kelley.

#### HYATT'S SECOND BANQUET

There were over 100 guests in attendance at the banquet and vaudeville entertainment given by the Hyatt Roller Bearing Co., of Newark, N. J., at Bretteau Hall Wednesday night. This is the second annual affair of the kind given by the company. "Senator" William J. Morgan was impressed as toastmaster. The "Upbuilding of a Great Business" was the topic of the principal speaker, Colonel Albert A. Pope, and his talk was as usual full of good, sensible advice. Secretary C. H. Gilette, of the A. A. A., had prepared a song, dedicated to the Mud Larks, and this was sung with vigor and gusto by the entire party. A miscellaneous program by several vaudeville artists completed the evening's entertainment.

#### TRADE MEN DINE

The first evening entertainment of the week was the smoker given by the Automobile Trade Club at the Hotel Navarre. There were over 200 guests present, representing not only the dealers, but also many who are interested in automobilism as a sport and pastime. The entertainment was principally musical, although a few brief speeches were made by W. E. Sarritt, A. D. Proctor Smith, E. B. Gallaber, Kirby Chamberlain Pardee, S. A. Miles, O. J. Hyde, O. J. Woodward and Ezra Kirk.

## REDUCED TO 39 SECONDS

### W. K. Vanderbilt, Jr., with his Mercedes Knocks the Fraction Off the World's Mile Record

Ormond, Fla., Jan. 27.—The mile straight-away record fell to 39 seconds flat today, thus eliminating Henry Ford's ice figure of 39 2.5 seconds, made January 11 at Detroit. The new figures belong to the 90-horsepower Mercedes machine and its owner and operator, W. K. Vanderbilt, Jr.

When the trial for the mile was made, the Mors timing apparatus was 15 miles down the beach at work timing races, but there were five watches at the start and three at the finish and when comparisons were made the time given was disputed by no one, while Chairman Pardonning announced that the record would be allowed.

Every condition was favorable for fast time. The beach was as perfect as it could be, while a strong north wind only served to aid in record breaking.

This official time, the fact that all the big cars have today been cutting out miles in the neighborhood of 45 seconds and the further fact that Vanderbilt yesterday made a mile in the neighborhood of his today's official figures, indicates what may happen to jar Lamberjack's delicate nerves and shatter his pessimistic views about times made in this country. Since a foreign car made the record, perhaps he may have changed his opinion.

All hands awakened at daylight for the preliminary match race for a cup offered by W. Gould Brokaw. The distance was 15 miles and M. G. Bernin in his 40-horsepower Renault won the first heat from E. H. Fredericks with B. M. Shanley's 40-horsepower Decauville. Through error no time was taken. A minute in time and a mile in distance separated the machines when the winner crossed the tape. In the second heat the Renault machine was first by 2 seconds, the time being 12:51 4.5, world's record.

S. B. Stevens, of Rome, N. Y., driving a 60-horsepower Mercedes, defeated H. L. Bowden of Boston in a 60-horsepower Mercedes in a 15-mile event, the time being 10:18, or 41 1.5 seconds to the mile, another world's record.

Barney Oldfield and Tom Cooper appeared on the course this afternoon with Bullet III, but approaching darkness and the course being soft from high tide prevented further races or trials today.

When Vanderbilt's record of 39 seconds was announced Oldfield remarked: "We will have to go for 38," to which Vanderbilt retorted, "I hope you will and I will try to make it 37."

With the advantage of the same high wind prevailing today it is prophesied that the mile record will be cut still further on the better going Daytona end tomorrow.

At a dinner given tonight to Vanderbilt by W. Gould Brokaw a cup was presented to the record holder by James L. Breesse, W. Gould Brokaw, A. D. Proctor Smith, W. H. Hall, R. M. Taft, Commodore Taft and Fred Mowery.

Summer weather prevails and the thermometer standing at 76, while light clothes, white suits and straw hats are common. A ball for the automobilists at the Ormond tonight is in progress.

Among the prominent racing automobilists here are: F. A. La Roche, Darraq; W. C.

Baker, Baker electric; J. A. Tracy, Peerless; Walter Christie, Christie; William Wallace, de Dietrich; B. M. Shanley, Decauville; W. G. Brokaw, Renault; W. K. Vanderbilt, Jr., Mercedes and the Dourdan record-breaking Mors. Tom Cooper and Barney Oldfield are here and expect the Winton Bulletin any moment. Lamberjack and Oscar Hedstrom are also here, the former expecting his Clement car and a motor cycle, while the latter has with him an Indian motor cycle.

The following trophies have been announced by the Florida East Coast Automobile Association for the competitions at the meet:

the Clyde Line, which will be known as the Clyde Line challenge cup. The Burgoyne cup, value \$250, presented by C. G. Burgoyne; a cup from James B. Moore, of Hartford, Conn.; a silver plated headlight from Gray & Davis, of Amesbury, Mass.; a similar article by the Rose Mfg. Co., of Philadelphia, Pa.; a cup by Angus Sinclair; a cup by Mr. Maus, of Daytona; the Diamond cup by the Diamond Rubber Co., of Akron, O.; nine prizes, given by the American Motor League; several prizes donated by the management of the Hotel Ormond.

#### REUNION OF THE MUD LARKS

Thursday evening the survivors of the New York-Pittsburg endurance run of last October and many of their friends gathered in the banquet room of Madison Square garden. It was the occasion of the first annual dinner and reunion of those making that most difficult of all automobile tests. The affair was elaborately unconventional. The sole object was good will, and the sole beverage was good beer, poured from gasoline cans, served by partly comprehending waiters, one of whom was glad in the knowledge that his celluloid shirt dickey had been ruined by the inscription "In Memory of Bath" written across it.

The speakers were introduced by Toastmaster S. A. Miles and all were exuberant in their praise of the hardihood of American cars and American motorists. Any topic relative to the endurance run seemed to inspire the speaker with patriotism, and never had Madison Square garden walls echoed so much hurrah for home industry. Even a newspaper man of the New York daily sort, whose livelihood depends a good deal upon the advertising he obtains from New York importers, threw bread and butter to the sparrows and launched into a magnificent panegyric, in which foreign automobiles were made to look like the proverbial 30 cents alongside the American beauties.

The principal speakers were W. E. Sarritt, Windsor T. White, Fred Nickerson, Colonel Pardee, Harry Unwin, John C. Wetmore and A. B. Tucker. The menu card was made out in the form of an observer's record, and a page from it best shows the general character of the dinner:

DURATION OF STOP	CAUSE OF STOP
10.00 o'clock	"PILOT CAR GET BENT."
10.10	"...LUBRICATION IS A GILLETTE, EX COMMUNIST RAGE."
10.20	"...40 H. V. OYSTERS, TORBURN Body, Open from the side."
10.35	"...WATER-LOGGED OLIVER, IS A Rip Van Winkle."
10.50	"...RATH [Lost we Forget]."
11.05	"...MILK MINUTE SALAD."
11.15	"...CHIEFS, Very High, is a Riker."
11.20	"...CLEVELAND ("After You, Al- phone.")"
11.25	"...CRACKER with Open Mufflers."
11.35	"...COFFEE, Strong and Getting Stronger."
11.40	"...PITTSBURG—with the Lid off."

# PICK-UPS AT THE SHOW

A new tilting wheel, operated by means of a push button, and which locks itself, was shown by the Centaur Motor Co., of Buffalo.

☞

"laundryette" and "garbage" are among the new words added to the vocabulary of the East Side Four Hundred since the show.

☞

E. B. Meyrowitz was late in installing an exhibit of new designs in goggles, masks and face covers, some of which are novel and others of the more common types.

☞

The dealers in sundries who were perched high up in the balconies were dubbed the "cliff dwellers" by an irreverent member of the Motor Age staff, and the name stuck.

☞

A pipe wrench, nut wrench, wire cutter, screwdriver and nail puller all in one is an article shown by William Ljorth & Co., of Jamestown, N. Y. Four sizes, ranging in capacity to take from 1/8 to 1-inch pipe were exhibited.

☞

A simple, compact little jack was shown by the Universal Jack & Power Co. The hand lever is attached to a shaft upon which is a worm, which in turn operates the lifting screw. It is so constructed that the strain comes upon a bearing of balls.

☞

One of the interesting sales of the week was the purchase by the Oldsmobile Co. of Philadelphia of 600 Oldsmobiles. It was stipulated that 100 of the machines must be shipped at one time in a special train, for advertising purposes.

☞

The de Laski & Thropp Circular Woven Tire Co., of Trenton, N. J., exhibited a sample of a new tire in which the fabric is woven in circular form and from coarse strands of cotton, to which, it is claimed the rubber will adhere better when vulcanized. The fabric is in one piece, of a single thickness and practically without a seam.

☞

One of the late comers was the Reliance Motor Cycle Co., of Addison, N. Y., which exhibited a 70-pound motor cycle with 1 1/2-horsepower motor set obliquely in the frame, with a belt drive to a friction roller, which in turn operates directly upon the tire of the drive wheel. The machine is fitted with a lever for the purpose of disengaging the friction roller. The control levers are placed on the top bar.

☞

The American manufacturers who claim they can make as good a stamped frame chassis as that exhibited at the show last week by the American Darracq Automobile Co. have been challenged to produce its equal, the American representative, F. A. La Roche, offering to pay \$10,000 if one of them makes good. The challenge, as issued by Mr. La Roche, is as follows: "The American Darracq Automobile Co. will give a cash prize of \$10,000 to any person, firm or corporation who can reproduce by April 1, 1904, an exact reproduction of the 15-20-horsepower chassis



which was on exhibition at the automobile show, the prize winner to be decided by a competent board of electrical and mechanical engineers, one engineer to be nominated by Mr. La Roche and one by the contestant, these two to appoint a third."

☞

Something new in the form of a dash odometer was shown by the Modern Mfg. Co., of New York. The machine is made with a total and trip recorder as well. Of the same shape and size the same company showed a clock, also designed to attach to the dash.

☞

Among the visitors at the show was Sir Henry Norman, a member of Parliament and editor of the World's Work. Sir Henry has done much to advance the cause of automobilism in England, and his articles on automobilism have perhaps been more widely copied than those of any other writer on that subject.

☞

The Champion Mfg. Co., of Newark, N. J., besides its gears, showed a new reverse clutch especially designed for motor boat work. The machine gives a forward, reverse and release, all controlled by one lever. It is designed to be fitted with solid propeller wheels to replace the reversible propellers usually put out by boat builders.

☞

The Gould Mfg. Co., of Trenton, N. J., had a novel talking point for its spark plugs in the guarantee to keep them sparking for a year or replace them. In carburetors the Gould company offered a simple float feed spray carburetor whose chief characteristic is control by a single throttle lever, said to include in its action automatic proportioning of air and fuel according to the speed of the motor.

☞

"Winter is the time for an endurance run," says F. A. La Roche. "It doesn't take much of a machine to travel over good roads in fair weather, but it is really a test of endurance to make a journey to Buffalo in a snow storm or when snow is on the ground." It is but fair to state that Mr. La Roche was not on the New York-Pittsburg run, where the weather was a combination of winter, summer, spring and fall, with snow, ice, mud and rain on side dishes.

☞

The Sintz Gas Engine Co., of Detroit, Mich., has branched into the manufacture of automobiles, having late in the week exhibited its new Panch-Pinch touring car, with four cylinders located under the bonnet and having pretty much all features of modern cars, but selling for \$1,250. The motor is rated at 10 horsepower, but conservative figuring would bring the horsepower pretty close to 15 upon the given speed of the motor with the stated cylinder measurements. The valves are mechanically operated, and the car is fitted with a cellular radiator. The frame is made from pressed steel, the rear axle solid, running in a steel casing, the drive by shaft, and the

wheels of the artillery pattern. The gear is of the sliding type, with three forward speeds and one reverse.

☞

The total insurance covering the stands was estimated to be over half a million dollars and a rate of 40 cents on \$100 was paid.

☞

Among the "lovelies" exhibited was the carpenter sand deflector, which is designed to be fastened at the back of the tonneau at an angle of 45 degrees, but which may be removed, folded and stored away when not in use.

☞

The attendance was a record-breaker for still life exhibitions, and the only attraction was the display of automobiles. There were no souvenirs to attract a crowd as in the old bicycle days. The people went to increase their knowledge of the motor car.

☞

In the new ignition devices at the show was the C. B. W. ignition dynamo, made by the Custer Beam Works, of Philadelphia, Pa. The dynamo is small, has a governor and it is claimed the use of batteries to start a motor is not necessary when the machine is used.

☞

The Tennant tire, claimed to be proof against puncture, was exhibited in the balcony. Between the walls of the tire proper and the inner tube is sponge rubber, which, it is claimed, not only acts as a cushion but prevents puncture as well. The air tube, however, is further protected by means of a strip of fabric.

☞

The Kingston carburetor for 1904, shown at the stand of Charles E. Miller, has a number of minor improvements over that of last year, being somewhat more compact and being made in a greater variety of sizes. The Hyne-Kingston people take pride in showing that Henry Ford's mile in 39.25 seconds, on the ice at Detroit, was made on the car when fitted with one of their carburetors.

☞

In the basement the Dieter three-cylinder, single acting steam engine was shown. The engine has a 3 1/2-inch bore and a 4-inch stroke, while the whole affair is but 20 by 13 by 7 inches. It looks like a four-cycle gas engine, being without slide valves, poppet valves taking their places. The valves open wide to admit steam, and remain open until the cutoff takes place, thus doing away, it is claimed, with the wire drawing of steam as in the ordinary type.

☞

The American Motor League had plenty of trouble during the week over its reduced rail road fare. This was exclusively for members but it had by some means been circulated that anyone could secure the low rate on the strength of the A. M. L. assembly, and consequently when it came to signing certificates many found themselves face to face with joining the league or losing the privilege of the reduced fare. There was a tendency to call such settlement coercion but President Potter was well armed with letters from the railway companies ex-



plaining the situation and was decisive in refuting suggestions that the league was trying to force certificate holders to join.

On account of the largeness of his reputation, many visitors were disappointed in the physique of C. L. Charley, of Mercedes fame.

With Duryen, as the original exponent, at the entrance, and with Thomas, as the chief booster for this year, at the Fourth avenue end of the garden, show visitors had a hard time keeping away from three-cylinder arguments.

The toastmaster at the annual banquet of the N. A. A. M. paid Moron Aoe an unconscious compliment when in the course of his remarks upon the certainty of an era of universal automobiles, he said: "And this epoch shall be called the Moron Aoe."

The menu card of the Mud Larks dinner stated that this reunion was all there was left of the endurance run of 1903. W. E. Searritt in his after dinner talk called the attention of the laiks to the fact that this statement was incorrect—that the effect of the run as a demonstration of the qualities of American cars and American automobilism, was permanent.

William Corlies & Co., of Providence, R. I., are putting on the market a new puncture-proof tire for automobile use, but beyond issuing a statement and showing a picture of the tire at the show were not in a position to tell details. The claim is made, however, that the tests so far made have proved more successful than anticipated.

Up in the balcony at the north end of the building J. W. Tygard, of Plainfield, N. J., expounded the virtues of a four-cycle engine with an impulse every revolution. The engine is unique, having a stationary piston with rotary valves within it, and a reciprocating cylinder, whereby the cycle of action of the four-cycle motor is effected at both ends of the piston. The motor is interesting and its construction and method of action will be fully described in a later issue of *Moron Aoe*.

The accommodations for the press were absolutely beyond criticism; in fact, at no similar event have newspaper men been so well cared for. A commodious room was supplied with tables, bulletin board and sideboard, all of which were generously used. Press Agent Reeves, with his assistants, "covered" the show daily and posted in dozen or more manifold sheets of each bit of news found. The newspaper man had only to ask for tickets and they were forthcoming, and if they are consulted in the matter they are here to vote Reeves a life job.

The New York Herald was far above competition in the publication of technical matter relative to the show, and automobile manufacturers should not overlook the fact. The writer of its automobile column is to be congratulated. It is not every newspaper man who can grasp the problem of automobile construction with such thorough comprehension. Here are samples: "The engine is built larger than the power it develops, being normally of forty, but throttled down to twenty-four, which affords a larger radiating surface. . . . For example, the main bearings of the motor have been fixed at such an angle that both the motor thrust and the chain pull are taken in the solid



half of the bearing. Reversing the engine not only renders the spark plug and carburetor accessible, but also counteracts the weight of the piston thrust against the cylinder wall. . . . The absence of gaskets permits the removal of the cylinder or crank shaft without disturbing the hang of the crank case in the frame."

Charles Shanks, of the Winton company, was happy during the week with a system of selling which proved effective. When a probable purchaser would ask concerning the date of delivery a date not far distant would be given, and this would be backed by the offer of \$100 forfeit if the cars were not forthcoming at that time. This procedure made a hit with those who had waited with over-taxed patience last year.

D. McRa Livingston, of New York, exhibited late in the week a new style of cellular radiator in which he makes the claim that size for size, outside measurement, the Arctic has a longer tube measurement than any other make by 45 per cent. The tube is twice as long as its vertical height, and in a radiator having fifty-five tubes and being 4 by 14½ inches there are 78 square feet of surface, while the space occupied by the tubes is but 14½ by 21 inches.

The Scheidler carburetor was shown by F. H. Wheeler, of Indianapolis, Ind. This carburetor is of the concentric float feed pattern, in which the float chamber surrounds the mixing chamber. One of the principal features is the method for controlling the richness of the mixture in accordance with the speed of the motor. When the motor is running at its minimum speed, the air is drawn through an aperture of fixed dimension. As the speed is increased, and consequently the flow of gasoline becomes greater, more air is required, and this additional supply is furnished by a compensating air valve which opens more and more in proportion to the quantity of gasoline used. The compensating air valve, when once adjusted is said to admit a regulated supply of air in accordance with the degree of vacuum produced by the action of the piston of the motor.

Something decidedly new is claimed for the Intrepid motor, made by the Rotary Motor Vehicle Co., of Boston. The machine is made in several sizes, but in all cases the engines are of the single vertical cylinder type, with the two valves on opposite sides and each being mechanically operated. The claim that this motor is vibrationless is based upon the following statement: "Action and reaction being equal, vibration in gasoline engines, whether multicylinder or single, is due to the tendency of the engine to rotate about the shaft in a direction opposite to its revolution. . . . Intrepid engines have two shafts rotating in opposite directions; therefore, the tendency of the cylinder to revolve around its shaft is neutralized, the vibration eliminated. The remaining vibration in the ordinary en-

gine is due to the reciprocation of parts, which cannot be balanced except in the Intrepid engine, where it is accomplished by placing half the counterweight on each shaft." The concern exhibited the motor, and is putting out a runabout and a light tonneau.

One of the funniest things at the show was the rivalry between the Darracq and Docaucville exhibitors. Each of these has a very cleverly conceived and produced pressed frame, incorporating a sheet steel pan which entirely encloses the bottom of the frame and also forms a rigid support for the motor. The two exhibits were but across the aisle from each other, and visitors were mean enough to stop first at one stand and then at the other in quest of information concerning the relative merits of the two forms of construction.

Walter Wardrop, of the Federal Mfg. Co., in speaking of the pressed steel frames produced by the company, called particular attention to the fact that the design was such that the frame could be readily adapted to individual requirements in length, width, taper and curve of side bars, and amount of inward bend at the front end of the frame. It is the old case of lack of uniformity which must be met in the production of pressed steel frames, as no two makers are satisfied with the same frame, and it is only by the use of sectional dies that the formation of the side bars may be varied without prohibitive additional cost. Wardrop says that it is in this adapting of an article to the various commercial requirements that American parts builders excel, it being the ambition of many European makers to create something of decided merit but that is not readily adaptable, and to then endeavor to force its standardization.

Out in front of the garden most any day during the show a few noisy young men were trying to sell copies of a new brand of automobile paper and the Automobile Topics Daily. The circulation of the latter must have been something immense, judging from the number of copies that seemed to be distributed in this manner and by the number available within the garden. It was a great affair, that daily. In metropolitan newspaper offices there is a habit among printers, necessitating the setting up in type of every large advertisement. To facilitate the game, however, it is customary for one paper to set up the big bargain ad of some big store and to then furnish the other papers with matrices from which duplicate stereotype plates can be made. Then, to live up to union requirements, the printers in each respective office go ahead and set up those same ads during spare time; read proof on them; send them for the proof; correct them; and then distribute them. Along about March, when work is slack, a half dozen "comps" may be found setting up Christmas advertisements. It is a very interesting and very inspiring work—much like the studiously serious task of the editors and editorial staff of that little Topics daily. How they reported; how they edited; how they made up that sheet and proof read it, that proprietor thereof might look it over, attack his O. K. to it, pay them their salary and tell the printers to "throw it in." What a pity its jibes and roasts and knocks were not spread broadcast before the impressionable public! Still the daily and its staff may be "more to be pitied than censured," no intense was the seriousness with which they took themselves.



# MOTOR AGE

Published Every Thursday by  
THE TRADE PRESS CO.

1303 MICHIGAN AVENUE CHICAGO  
Telephone Calumet 7011

New York Office, 114 West 18th Street.  
London Office, American Publication Bureau,  
18 Manor Park Rd., Harlesden, N. W.



Entered at the Chicago Post Office as Second  
Class Mail Matter



Subscription, Two Dollars per Year  
Foreign Subscriptions, Four Dollars



Any Newsmen may obtain Motor Age through  
the Western News Co., Chicago, or any  
of its branches, on a returnable basis

## SPECIAL OR COMMON LAW

THE New York State Automobile Association is endeavoring to secure the passage of a bill providing an automobile law to supersede the Bailey law in that state. The bill is the result of much effort to effect a statute which will be simple and free from the confusing provisions which usually embellish the automobile sections of the law and the gospel as handed down by the state fathers.

The bill in full is printed elsewhere in *MOTOR AGE* of this issue. There is no doubt that it is a great improvement upon the present law. There should be no hesitancy in supporting it unless that hesitancy is born of the conviction that the best automobile law is the common law.

There is a growing opinion among automobilists that all the good energy which has been and is being spent in efforts tending toward the enactment of reasonable automobile laws, should be expended in creating a sentiment among legislators toward the outright abolition of special laws.

Special laws are bound to be confusing. The need of special laws is always temporary. There is now no more need for a special bicycle law than there is for a special wheel barrow law.

The development of automobilizing is bound sooner or later to wipe out of existence all possible excuse for specialities in the way of superfluous embroidery around the edges of the statutes.

As Colonel Pope said at the annual banquet of the National Association of Automobile Manufacturers last week, the roads were made by man and are for man. They are not for horses and they are not for any particular class of road users.

The roads are for the purposes of transit and it is no more reasonable to divide road users by the style of motive power than it is to divide them by the color of the paint on the vehicles they employ.

Man will ever use wagons and carriages upon the roads. The fact that they may be drawn by motors instead of by horses is incidental and inconsequential so far as the rights of the highway are concerned. It is merely a matter of progress.

Classification by kind of power is classification by prejudice. Regulation by specializa-

tion of law is regulation by prejudice. Effort to secure modifications of and improvements in laws of specialization is effort to assist government by prejudice.

Automobilists must be decent. They must be law abiding citizens, in the use of the highways just as much as in the use of hotels and club rooms. A gentleman never has any trouble with society, whether he be under common or special law, or whether he drives a motor car or a blond horse.

The prejudicial idea that motor car users as a class are dangerous users of the highways is rapidly disappearing. There cannot be much occasion in the future to distinguish between them and other road users, for there are in reality only two classes of road users—road hogs and gentlemen—and each class is composed of horse drivers, automobilists, bicyclists and farmers.

The use of the highways may be very well governed by a simple law which will define a code of decency for all. Then the gentlemen of all classes should co-operate in squelching the road hogs of all classes, under the provision and authority of this law.

The unconstitutionality of class legislation is not so striking as the impracticability of it. It is a slow, expensive and tedious process to fight out the constitutionality of a thing. It is often more quickly effective to campaign vigorously in the interest of the practical view of the case.

In this latter work every automobilist and every automobilizing organization in the country can hustle early and late with good results. Sooner or later the attainment of a general law for all the users of the highway must be brought about.

The automobilist is the most directly interested of all road users in such accomplishment. To his own labors now will be laid a large measure of the success in attaining the condition soon. Of more lasting benefit to him than the securing of reasonable special laws is the wiping out of special laws. The motorist should strike hard for the permanent result.

There is a possibility that present conditions may be bettered by the enactment of special automobile laws such as that proposed by the New York state association; laws to be in force during the time of the reorganization of road government.

It is an open question whether or not to pursue such a conservative course or to pursue the holder course of striking out directly for the result which must be the final disposition of the matter.

*MOTOR AGE* does not wish to disparage any efforts such as those of the New Yorkers toward the securing of the enactment of better special laws than those now in force in most states. It is inclined to believe, however, that the same conscientious and persevering effort expended in the other direction would be of more direct good.

The Hill bill in New York proposes a law much better than the Bailey bill. Good. A common law for all the users of all the highways is better still and is not of so visionary a character that the combined efforts of all the automobilists cannot get it.

If such a law as that proposed by the Hill bill is all that conditions in New York state will permit the attainment of during the next 5 years, the state association is doing work worthy of its caliber.

If the time is ripe for a more sweeping crusade the state association should be among

the leaders in that crusade, because it is a prominent body of automobilists in one of the most prominent automobilizing states.

## EMANCIPATION

"ICY streets bring death to horses; more than fifty, crippled by falls, have to be shot by animal society agents." This is the head line of a story in a New York daily newspaper of last week.

It is a valuable addition to the evidence tending to show the humanity of universally adopting automobiles in accomplishing the world's work.

The world's play is done under choice conditions. The work must be done under all conditions. The motor has no tired legs to stumble and slip; no aching body to be put to rest by a humane society bullet sent as a last reward for a life of drudgery.

Do the prejudicial ones among horse enthusiasts revile the motor because it comes to stop the abuse of tired horse flesh?

\*\*\*

The German trade papers are calling the attention of the German automobile manufacturers to the South African market, which just now is one of the best for motor cars. It appears that the farmers in South Africa, after having used different kinds of imported horses for their agricultural work, found they could not withstand the South African climate and did not render as good services as expected. Tests were made with light automobiles and the results were so satisfactory in every respect that farmers bought almost the entire supply of the leading South African dealers. English firms are now said to be rushing large shipments of motor cars to the south.

\*\*\*

N. Boyer, a French manufacturer, was sentenced to 3 days' imprisonment because he violated the law regarding the carrying of a numbered plate. One of Boyer's employees was driving his car which had the number written in chalk instead of having the regular plate.

\*\*\*

A number of German railway companies have ordered that a piece of cloth or a piece of lumber, painted bright red, be placed on railway crossings so that motorists will be able to see them from a great distance. At night a light will be hung in the middle of the road.

\*\*\*

It must have shocked the sensitive nerves of some of the foreigners at the show to stand in front of Henry Ford's 999 in the basement and contemplate what that grotesque collection of wood and metal did to their own dear mile record.

\*\*\*

The defeated prize fighter extends a hand in congratulation to his victor; the successful political candidate receives the good wishes of his late adversary; the man who expresses no wish to his victor pronounces his own caliber.

\*\*\*

What obligation does the trade owe a little dinky show daily that it is pleased to stand for the publication in it of fake news which, if appearing in a permanent weekly trade paper, would cause a roar of disapproval?

\*\*\*

President Potter, of the A. M. I., seems to believe in the old idea—"say nothing and say wood."

# IN OTHER LANDS THAN OURS

## OUTSTRIPS OTHER CONVEYANCES

C. H. Martin, of New York, with a Knox machine, made a new record in rapid transportation in Porto Rico last week. The distance from San Juan to Ponce over the mountainous military road connecting the two largest cities of the island is 81 miles. The regular time consumed in making the trip by coach is 14 hours, and by steamer the time is about the same, so that it is a good hard day's work at the best.

Mr. Martin accepted an engagement from a prominent lawyer who had business in the two cities on two consecutive days to make the round trip in one day and thus enable the lawyer to meet his two important court engagements. The record was 6 hours one way and 6½ hours returning, leaving Ponce in the morning and reaching Ponce after having visited the capital that same evening. While such a run might not excite comment in the United States, it was truly a novelty in Porto Rico and was a sensation.

The road is so mountainous that the best previous performances of motors have fallen far below this mark. A regular automobile



MOTOR AGE

MISS WHITNEY IN PORTO RICO

rying capacity there are expectations that the high freight rate can be reduced and the time now consumed in making the trips almost eliminated from calculations.

The beautiful military road for mountain scenery is not surpassed anywhere in the world. For miles the road is built upon an artificial ledge along the mountain side, overlooking vast valleys, in some places a thousand feet deep and with peaks rising above to over 4,000 feet above sea level. Miss Jessemaire Whitney, a graduate of Cornell, who took

## DANGEROUS RACE COURSE

Before the road of the circuit de l'Argonne was finally selected for the running of the French Gordon Bennett cup team preliminary race, a committee consisting of Chevalier Rene de Knyff, Prince d'Arenberg and Marquis de Vigne were sent by the sports committee of the Automobile Club of France to investigate the course. They reported it to be one of the best to afford a hard test, but agreed that it is one of the most difficult and most dangerous roads in France. L'Auto, of Paris, sent George Prade and Rigolly to inspect the road and the latter, after returning to Paris, seemed less anxious to take part in the trial race than before he had gone over it. "It is one of the worst roads I have ever ridden over," said Rigolly, "and some of the stretches are so narrow, others so steep and still others turn so sharply that the utmost care will be required to get through without accidents. It is certainly not the fastest car which will have the best of it on this road. Although I like speed, I would not dare to speed at more than about 50 miles per hour over this road."



AT THE CHURCH IN RIO PIEDRAS



EXTREMES IN PORTO RICAN TRANSPORTATION

who was started to connect the two cities last year and the mail contract was secured for a twice daily service. It proved a failure, however, on account of the frequent breakdowns and unsatisfactions of various kinds.

Four attempts in all have been made to establish a regular service, but all have failed to maintain any reliable schedule and all were finally abandoned. The fare by coach, which includes five relays of horses, is \$14, and therefore the idea that an automobile service would be a paying project has prompted many to attempt the inauguration of such an enterprise.

The failure of all of these projects is said to be due to the impracticability of steam machines or light machines of any kind. Mr. Martin used a slow but powerful engine and found no difficulty in surmounting all topographical obstacles.

This news that the success of an automobile service across the island is not without hope has caused considerable interest among the people there. It means a great stride in the transportation problem. Horses are not suitable for this climate and cannot endure the tedious trips across the mountains and with a possibility of supplanting the slow ox-cart freight trains with automobiles of large car-

a prominent part in athletics in college, was a passenger on one of the recent trips from Ponce to San Juan. She had never had any previous experience in handling a machine, but very quickly mastered it, finally taking entire charge and directing the vehicle the greater part of the distance. The woman motorist heretofore was unknown in Porto Rico, and in fact the motor itself is something of a novelty, there being only three on the island now, all belonging to non-residents.



MOTOR AGE

START FOR PONCE FROM SAN JUAN

## DE KNYFF ON SELDEN PATENT

According to a statement made by Rene de Knyff, in the name of Pinhard & Levassor, the rumor that a large number of French manufacturers have combined and will take steps to defend themselves against any attack being made upon them, as an outgrowth of the Selden patent controversy, is correct. "Such concerns as Moss, de Dietrich, Goblou-Brillie, Georges, Richard, Adler, de Dion-Bouton, Peugeot, Pinhard & Levassor and others have now or guized," said de Knyff. "We will soon meet at the office of a well known lawyer, who is himself the Paris representative of one of the foremost attorneys of New York. We will then study all possible legal means to guarantee the common interests of the French industry." Questioned as to what he thought about the attitude taken by the owners of the Selden patents, de Knyff said: "I do not believe we need be excited about it. Our rivals bluff, as only the Americans can. However, as it is well to be careful and take precaution. We have taken the action named so that we may not be taken unaware in the event the owners of the Selden patents desire to establish in a legal way the value of their pretensions. I want to repeat, however, that I do not believe they will push a joke so far."

# TURBULENT ANNUAL MEETING

## Election of Directors of the N. A. A. M. Enlivened With Warm Talk—Matters of Show Space and Endurance Run Awards the Chief Bones of Contention—Amendments Voted Down

New York, Jan. 21.—There were thirty-four members in attendance at the annual meeting of the National Association of Automobile Manufacturers, which was held in the concert room of the Madison Square garden today. The list of the active members present furnished the press numbered twenty-five. Others came in later and raised the number of those in attendance to thirty-four, which was the number that voted for the officers. The twenty-five were as follows:

Moyen Automobile Co., Henry C. Cryder; Thomas B. Jeffery & Co., George W. Bennett; National Motor Vehicle Co., Thomas Hay; Peerless Motor Car Co., L. H. Kittredge; Baker Motor Vehicle Co., M. L. Goss; Winton Motor Carriage Co., Alexander Winton; Royal Motor Car Co., J. W. McCrea; Locomobile Co. of America, S. T. Davis, Jr.; Duryen Power Co., Charles E. Duryen; Automotor Co., A. P. Smith; Ford Motor Co., James Couzens; Buick Automobile Co., A. V. Brower; Upton Machine Co., William J. Murray; Prescott Automobile Mfg. Co., A. L. Prescott; J. Stevens Arms & Tool Co., I. H. Page; Grout Bros. Automobile Co., C. B. Grout; H. H. Franklin Mfg. Co., H. H. Franklin; Matheson Motor Car Co., C. W. Matheson and C. U. Clark; George N. Pierce Co., Charles Clifton; Studebaker Bros. Mfg. Co., T. W. Goodridge; White Sewing Machine Co., Winborn T. White; Olds Motor Works, Rumson E. Olds; Knox Automobile Co., E. H. Cutler; Pope Mfg. Co., Albert L. Pope; Woods Motor Vehicle Co., J. Wesley Allison; Cadillac Automobile Co., W. E. Metzger; Autocar Co., M. Brock; Berg Automobile Co., H. O. Berg.

The proceedings were not unanimous enough to be monotonous. If there was any cut and dried programme it failed to go through on greased wheels; an insistent and stubborn opposition developed to the smooth running of the machinery characteristic of former meetings of the association. It was made up, without much reason to doubt, of the concerns not represented in the 1903 executive committee and seemingly to a conspicuous extent of concerns not licensed by the A. L. A. M. It showed above the surface in no opposition ticket made up of four unlicensed concerns and one electric manufacturer, who needed no license.

It was decidedly "agin the government" on general grounds and for specified reasons. It was in constant dispute with the decisions of the chair. Its complaints were an unfair allotment of space at the shows and at St. Louis, unfair awards in the endurance run, and all around discrimination in favor of concerns at present holding offices in the association and places on the executive committee.

George W. Bennett, representing Thomas B. Jeffery & Co., was the sole and evidently duly accredited and instructed spokesman of the opposition and also had complaints affecting solely the company he represented to offer. Mr. Bennett proved a stubborn fighter and was in constant conflict with President Budlong, who presided, and his decisions. The fight was a running, rambling one that often got beyond the motion under discussion and proceeded much of the time at random without

any particular question being formally under consideration.

The skirmishing began with roll call and the chairman's announcement that certain members, who had not paid their dues, were not in good standing and so not entitled to vote. Mr. Budlong pointed to a section of the by-laws specifying the requirements of a member in good standing and Mr. Bennett retorted by another section providing for the lapse of a certain time before a member should forfeit his privileges. The dispute was never brought to a vote and finally was lost in the shuffle of the rambling discussion between Mr. Bennett and the president, who stoutly maintained his position, as he said, by the advice of the counsel of the association.

The discussion soon drifted into an accusation by Mr. Bennett of favoritism toward the "powers that be" in the allotment of spaces at the garden. He showed a diagram, on which was indicated spaces held by "insiders." President Budlong finally called upon S. A. Miles, manager of the association, who represented the N. A. A. M. when the allotment was made, to tell of its modus operandi. Mr. Miles said it representative of each of the three promoters of the show—General Smith, of the A. C. A.; Mr. Sanger, of the garden company, and himself, in behalf of the association—had made the allotments. He explained how that the excess of the demand for space over the supply had compelled the spaces applied for to be very largely cut and called attention to the rules of allotment providing for preferences according to the number of times an applicant had exhibited at the shows. He did not remember how many times the Jeffery company had been an exhibitor, as compared with those to whom Mr. Bennett alleged preferences had been shown, but he knew that the Rumber people had received their allotment strictly in accordance with the rules laid down. As for St. Louis he would state that Thomas B. Jeffery & Co. had received 150 more square feet than they had applied for.

Mr. Clifton, of the George N. Pierce Co., who had participated in the St. Louis allotment, got up and offered to change spaces with the Rumber. Mr. Davis, of the Locomobile Co. of America, and Mr. Budlong, of the Electric Vehicle Co., offered the Jeffery company their spaces and the matter was dropped, after Mr. Bennett had protested against personal offers and declared he had spoken for others as well as his own company.

Mr. Bennett took up the fight along another line. He explained that his company had refused to sign the St. Louis agreement to bear a pro rata share of the expenses because their amount was indefinite. Mr. Miles and Mr. Clifton explained that the association proposed to devote a very considerable sum to the expenses of the association's exhibit and that the individual members were being asked to agree to pay what little excess might possibly occur.

During the course of the various discussions Mr. Bennett more than merely intimated that the association was being run with preferences always in favor of members of the

licensed association. Mr. Budlong warmly disputed this and declared that in the meeting of the executive committee no discriminations of any kind were recognized in the membership.

The suggestion that the association be incorporated, so that its members might not be made individually liable beyond the assets, was adopted without opposition. It was about the only motion of the meeting that went through unanimously.

Amendments to the constitution and by-laws giving the executive committee power to amend the by-laws, making concerns in business less than one year ineligible and keeping tabular papers out of membership, were lost in order, and finally all the amendments were voted upon in a bunch and defeated.

Upon the announcement by the president that the election was next in order, Mr. Bennett again disturbed the short lived peace by bringing up the protest of the Thomas B. Jeffery & Co. against the omission of its Rumber from the gold medal award list of the endurance run and insisting it was in order for the members' consideration, in opposition to President Budlong's ruling that it was a matter for the executive committee's action and had been disposed of at its meeting in the morning. Mr. Bennett stoutly maintained his right to present the protest to the association at large. S. T. Davis, Jr., urged that the protest be heard and Mr. Bennett read his company's presentation of facts and arguments, setting forth the circumstances of the tardiness of both the Columbia and Rumber machines at the Buffalo garage and protesting against gold medal award to the former and its denial to the latter. The points of controversy are well known. A discussion followed in the course of which Mr. Bennett charged that the action taken was not by a full representation of the executive committee. President Budlong and other committee members declared that the records would show that practically the entire committee was at the meeting. Mr. Bennett declared that he had letters from several members, saying they were not present and maintained that his assertion was true, that even if there was a full attendance on record, there were quite a number absent while the discussion affecting the award to the Rumber was in progress. Mr. Miles corrected an imputation of Mr. Bennett that the "employees" of the association had too much to do with the award. He said he supposed he might be called an "employee" and that he had recommended to the committee the Rumber as worthy of award, but that the committee had not accepted the suggestion. And finally came to the discussion by the reference of the protest to the executive committee. A resolution directing that the headquarters of the association be moved from New York to Cleveland or Buffalo, was offered by Mr. Bennett, but he failed in his effort to have the by-laws suspended for action on it.

The election came next in order. President Budlong appointed L. H. Kittredge, Hart O. Berg and H. H. Franklin tellers and announced that each ballot must be signed by the member voting and later included somewhat definitely its representative. Informal suggestions were made to Mr. Budlong, while the ballots were being distributed, that the ballots be destroyed at once after the result was announced, in view of such an open balloting record being adopted.

The names of ten candidate concerns were on the ballot. The name of the Autocar Co.



however, was withdrawn. Mr. Kittridge announced that thirty-four ballots had been cast, but that three had been rejected owing to their not being signed at all or being signed by an individual and not by the company. The votes announced as having been received by the five leaders were: Thomas B. Jeffery & Co., twenty-five; Baker Motor Vehicle Co., nineteen; Knox Automobile Co., eighteen; Winton Motor Carriage Co., seventeen; Electric Vehicle Co., thirteen. The first two named were on the so-called "independent" ticket. The votes received by the other candidates are said to have been: Cadillac Automobile Co., sixteen; Ford Motor Co., fourteen; Crest Mfg. Co., thirteen, and Moyer Automobile Co., now the Consolidated Motor Co., thirteen.

It has since been reported that after the result was announced Mr. Jeffery and Mr. Bennett examined the ballots and found four more than the three referred to by Mr. Kittridge which failed to have both the signature of the company and its representative and demanded that the ballots be preserved. Mr. Budlong is said to have told Mr. Jeffery and Mr. Bennett that they had no right to examine the ballots and to have ordered them destroyed in accordance with the suggestions made to him during the distribution of the ballots following his directions that the ballots be signed. The Motor AGE man noticed no such occurrence and learned the story after his departure from the meeting. It was his understanding of the president's directions that the crucial point was that the ballots should be signed by the member voting, though there was something said subsequently about the ballots bearing the signature of the representative also. The necessity for the signature of the representatives was not emphasized, according to the writer's impression and hearing. This statement is made in justice to the integrity of the tellers, if the story be found true that Mr. Jeffery and Mr. Bennett discovered four ballots that had been counted and not so signed.

The reports of the officers were read early in the proceedings. The treasurer's showed a balance of \$1,419.23 on hand January 1, 1903, and the present balance to be \$5,268.31. The total receipts were \$36,261.61 and the disbursements \$31,000.07. The 1903 Chicago show netted to the association \$20,104.75 and the New York show of that year \$11,335.18. Some of the items of disbursement are: Endurance run, \$5,095.64; legislation, \$6,030.32; executive committee, \$2,945.40; fees and mileage, \$2,539.82.

The principal portions of the president's report were as follows:

The closing year has been one of unqualified success in the work of the association, which has been active in work connected with legislation, the promotion of the good roads movement, the reduction of show expenses, the promotion of the American exhibit at the St. Louis exposition, the standardization of certain parts and accessories, the management of an endurance test, the promotion of publicity, and many matters of minor import. The association is at the present time engaged in an endeavor to secure a reduction of freight rates, and the passage of the well-known Brownlow bill, in the preparation of information relative to foreign markets, arranging for the exhibits of members at the

St. Louis exposition, and the control of many matters of lesser importance.

There have been admitted fourteen active and fifteen associate members, while two active and four associate members have retired on account of failures, withdrawals from business or resignations. There are at present fifty-six active and seventy-three associate members.

Acting upon the advice of the membership committee, the executive committee has accepted few new members who have been engaged in the manufacture of automobiles, parts or accessories, less than 12 months, and only such manufacturers of automobiles whose product was such as would, from the information obtainable, be a credit to the industry, and sufficiently reliable and legitimate to offer to the buying public. It is recommended that a provision making this qualification essential to membership be included in the by-laws.

When, in the early part of the year, the well-known Bailey bill was introduced in the legislature of the state of New York the executive committee, deeming the matter of vital importance, made earnest endeavors to prevent the passage of the bill. Through our efforts in that direction a hearing was granted by the governor, and upon advice from a large number of the members and influential men of political prominence in the state of New York your committee retained the best legal talent and counsel obtainable to represent us at the hearing, in addition to which we secured the services of such eminent lawyers as De Lancey Nicol and W. D. Guthrie, without cost to the association. Having been unsuccessful in our efforts in this direction, the executive committee instructed its counsel to prepare a test case, the result of which was that certain obnoxious clauses of the bill were declared unconstitutional by the court of special sessions, first division.

Contributions were also made in support of legislation in Connecticut, New Jersey and Pennsylvania, with satisfactory results.

The executive committee contributed \$1,000 toward the expense of promoting the welfare of the Browlow bill.

The management of the world's fair suggested that the allotment of space be made by the association, which has been done. The executive committee made a preliminary appropriation of \$5,000 to help defray the expenses of the exhibit of its members, provided they agreed to accept the association's plan of decoration and general management. Of the forty-five members who applied for space thirty-seven have accepted the association's plan. Only one declined. The others have failed to reply and some of them will probably not exhibit. There have been allotted approximately 40,000 square feet of space, or 80 per cent of the entire automobile exhibit. The total will probably reach 45,000 square feet after a few members who have not yet reached a decision decide to include their goods as part of the association's display.

Supported by the opinion of counsel, the executive committee believes that the association should be incorporated. A plan has been prepared which will relieve every member of individual liability, without the necessity of issuing stock, and which will permit the association to be continued on practically the same lines as heretofore. Before the work can be consummated it is necessary to secure the sig-

natures of all members. Of the 129 members now on the books about 75 per cent have signed. Those who have not already done so are urged to sign without delay.

The present contract for the New York show, in which the Automobile Club of America, the Madison Square Garden Co. and this association are interested, runs one more year. A contract has been entered into for the Chicago show for 3 years, under conditions which are most favorable to the association and its members.

The association undertook for the first time to conduct an endurance run, the details of which long since became public property. The unprecedented storm made it appear at one stage of the run that not a single machine would be able to reach Pittsburg. The operators of the machines displayed wonderful nerve and twenty-five of the thirty-four starters completed the journey under conditions which were indescribably bad. The test furnished the best proof it would have been possible to obtain of the splendid construction of American cars, and of the pluck and endurance of the men who operated them. The question of future runs is one on which the executive committee would like an expression of opinion by the members.

The officials of the association have occasionally been asked what influence, if any, the affiliation of members with other associations and clubs would have upon the work of this association. The reply has always been that officially we do not know of the existence of any other association or club, that none has ever been mentioned in the meetings of the executive committee, and that, under no circumstances, are outside conditions permitted to interfere with the loyalty of the gentlemen whom you have elected to serve you upon the executive committee.

#### OLD OFFICERS RE-ELECTED

New York, Jan. 26.—In view of the character of the annual meeting a few days before and in consideration of the rather forceful manner in which the administration of the past year had been then criticized, the members of the executive committee in their meeting Saturday morning at Madison Square Garden deemed it best for the interests of the whole association to publicly vindicate the officers of last year and so re-elected Milton J. Budlong president, Windsor T. White was re-elected first vice-president; Charles Clifton, second vice-president, and R. E. Olds, third vice-president. W. R. Innis was elected treasurer in place of Percy Owen, the latter declining to serve another term on account of the press of business duties.

A special committee was empowered to enter into contracts for the automobile exhibition to be held at the St. Louis exposition. It was reported that 40,150 square feet had been given to American manufacturers out of a total automobile space of 50,000 square feet.

The protest of Thomas B. Jeffery & Co., which claims its car was entitled to a medal in the recent New York to Pittsburg endurance run, came up for action and the executive committee decided to make no change in its original ruling, which did not give first honors to the machine in question.

All of the directors were present except R. E. Olds. The next meeting of the executive committee will be held February 10, at the Chicago show.

# NEW YORK'S AUTOMOBILE BILL

## State Automobile Association's Draft Presented to the Assembly by Senator Hill of Buffalo—Bailey Bill Defects Remedied—The Proposed Law in Full

The legislative committee of the New York State Automobile Association was one of the first to get vigorously to work, and the result of its energy is a bill which was introduced in the assembly at Albany last week by Senator Hill, of Buffalo. This bill was virtually drafted by the members of the committee on legislation of the association, and represents the result of a careful study of the automobile laws of the different states whose statute books are graced by such laws, the definite purpose being to rid the proposed law of the confusion of meaning which characterizes most motor car laws and to embrace the most desirable features of the several statutes examined. The occasion for the introduction of such a bill is the common dislike of the present Bailey law, which was enacted under strenuous protest and which has been almost wholly disregarded since its enactment on account of its manifold absurdities, conflicting provisions and unconstitutional features. The New York association believes the law expressed in the Hill bill to be adequate and concise. It is working hard toward the passage of the measure. The bill as drafted is as follows:

**SECTION 1—Subdivision 1—Short Title.**—The short title of this act shall be the "Motor Vehicle Law." Except as otherwise herein provided, it shall be controlling, 1, upon the registration and numbering of motor vehicles; 2, on their use of the public highways, and 3, on the penalties for the violation of any of the provisions of this act.

**Subdivision 2—Definitions.**—The words and phrases used in this act shall, for the purposes of this act, unless the same be contrary to universally accepted meaning or unless inconsistent with the context, be construed as follows: 1, "Motor vehicle" shall include all vehicles propelled by any power other than muscular power, excepting such motor vehicles as run only upon rails or tracks, provided that nothing herein contained shall apply to traction engines or road rollers; 2, "Public highways" shall include any highway, country road, state road, public street, driveway or place in any city, village or town; 3, "closely built up portions" shall mean, a, the territory of a city or village contiguous to a public highway devoted to business, and also, b, the territory of a city, village or town contiguous to a public highway not devoted to business, where for not less than one-fourth of a mile the dwelling houses on such highway average not more than 100 feet apart; 4, "local authorities" shall include all officers of counties, boroughs, cities, villages or towns, as well as all boards, committees and other public officials of such counties, boroughs, cities, villages or towns.

**SECTION 2—Subdivision 1—Filing statement.**—Every owner of a motor vehicle shall, for every vehicle owned by him, file in the office of the secretary of state a statement of his name and address, with a brief description of the vehicle to be registered, on a blank to be prepared and furnished by such secretary for that purpose. The filing fee shall be \$2.

**Subdivision 2—Registration and record.**—The secretary of state shall thereupon file such

statement in his office, register such motor vehicle in a book to be kept for that purpose, and assign it a number, beginning with the number one and so on in the order of filing.

**Subdivision 3—New owners.**—Every person acquiring a motor vehicle shall file a like statement with the secretary of state and such secretary of state shall, in like manner, file such statement, register such vehicle and assign it a number. If the vehicle has previously been registered, such fact and number assigned it shall be set forth in the statement, and the previous registration shall be cancelled; but the number of such previous registration may be assigned under the new registration. Subject to the provisions of subdivision six of this section, upon the sale of a motor vehicle, the vendor shall, within 5 days, return to the secretary of state the registration seal affixed to such vehicle, with notice of the sale and of the name, place of residence, and address of the vendee.

**Subdivision 4—Registration seal.**—The secretary of state shall forthwith on such registration, and without other fee, issue and deliver to the owner of such motor vehicle a seal of aluminum or other suitable metal, which shall be circular in form, not over 2 inches in diameter, and have stamped therein the words "Registered in the office of the Secretary of State for the state of New York, under the motor vehicle law, No. —," with the registration number inserted therein; which seal shall thereafter at all times be conspicuously displayed on the motor vehicle to which such number has been assigned.

**Subdivision 5—Display of registration number.**—Every motor vehicle shall also at all times have the number assigned to it by the secretary of state displayed on the back of such vehicle in such manner as to be plainly visible, the numbers to be in Arabic numerals, black on white ground, each not less than 3 inches in height, and each stroke to be of a width not less than 1/2 inch, and also as a part of such number the initial letters of the state in black on white ground, such letters to be not less than 1 inch in height.

**Subdivision 6—Registration by manufacturers or dealers.**—A manufacturer of or dealer in motor vehicles shall register one vehicle of each style or type manufactured or dealt in by him, and be entitled to as many duplicate registration seals for each type or style so manufactured or dealt in, as he may desire on payment of an additional fee of 50 cents for each duplicate seal. If a registration seal and the corresponding number shall thereafter be affixed to and displayed on every vehicle of such type or style as in this section provided, while such vehicle is being operated on the public highways, it shall be deemed a sufficient compliance with subdivisions 1, 4, 5 and 8 of this section, until such vehicle shall be sold or let for hire. Nothing in this subdivision shall be construed to apply to a motor vehicle employed by a manufacturer or dealer for private use or for hire. Nor shall a manufacturer or dealer be obliged to observe subdivision 3 of this section, provided that, on the sale of any motor vehicle within the terms of this subdi-

vision of this section, he shall remove the registration seal therefrom.

**Subdivision 7—Fictitious seal or number.**—No motor vehicle shall be used or operated upon the public highways after 30 days after this act takes effect which shall display thereon a registration seal or number belonging to any other vehicle, or a fictitious registration seal or number.

**Subdivision 8—Unregistered vehicle not to be operated.**—No motor vehicle shall be used or operated upon the public highways after 30 days after this act takes effect, unless the owner shall have complied in all respects with this section.

**Subdivision 9—Exemption of non-resident owners.**—The provisions of this section shall not apply to motor vehicles owned by non-residents of this state, provided the owners thereof have complied with any law requiring the registration of owners of motor vehicles in force in the state, territory or federal district of their residence, and the registration number showing the initial of such state, territory or federal district shall be displayed on such vehicle substantially as in this section provided.

**SECTION 3—Subdivision 1—Speed permitted.**—No person shall operate a motor vehicle on a public highway at a rate of speed greater than is reasonable and proper, having regard to the traffic and use of the highway, or so as to endanger the life or limb of any person, or in any event in the closely built up portions of a city, village or town, at a greater rate than 1 mile in 6 minutes, or elsewhere in a city or village at a greater rate than 1 mile in 4 minutes, or elsewhere outside of a city or village at a greater rate than 1 mile in 3 minutes; subject, however, to the other provisions of this section.

**Subdivision 2—Speed at crossings, etc.**—Upon approaching a crossing of intersecting public highways, or a bridge, or a sharp curve, or a steep descent, and also in traversing such crossing, bridge, curve or descent, a person operating a motor vehicle shall have it under control and operate it at a rate of speed less than heretofore specified, and in no event greater than is reasonable and proper, having regard to the traffic then on such highway and the safety of the public.

**Subdivision 3—Meeting horses, etc.**—Upon approaching a person walking in the roadway of a public highway, or even a horse or horses, or other draft animals, being ridden or driven thereon, a person operating a motor vehicle shall give warning of its approach by signaling with a horn, bell or other device, and use every reasonable precaution to insure the safety of such person or animal, and, in the case of horses or other draft animals, to prevent frightening the same, and at once reduce the speed at which such vehicle is being operated, and, if such horses or other draft animals appear frightened, to not move more than one-half the speed permitted by subdivision 1 of this section.

**Subdivision 4—Stopping on signal.**—A person operating a motor vehicle shall, at request or on signal by putting up the hand, from a person riding or driving a restive horse or horses or other draft animals, bring such motor vehicle immediately to a stop, and, if traveling in the opposite direction, remain stationary so long as may be reasonable to allow such horse or animal to pass, and, if traveling in the same direction, use reasonable caution in thereafter passing such horse or animal; provided that, in case such horse or animal

appears badly frightened or he is requested so to do, the person operating such motor vehicle shall cause the motor of such vehicle to cease running so long as shall be reasonably necessary to prevent accident, and insure the safety of others.

**Subdivision 5—Giving name and address.**—In case of accident on the public highway, due to the operation thereon of a motor vehicle, the person operating such vehicle, shall, upon request, of a person injured, or one representing him, give such person his name and address and, if not the owner, the name and address of such owner.

**Subdivision 6—Speed tests and races.**—Local authorities may, notwithstanding the other provisions of this section, set aside for a given time a specified public highway for speed tests or races, to be conducted under proper restrictions for the safety of the public.

**SECTION 5—Subdivision 1—Rules of the road.**—Whenever a person operating a motor vehicle shall meet on a public highway any other person riding or driving a horse or horses or other draft animals or any other vehicle, the person so operating such motor vehicle shall reasonably turn the same to the right of the center of such highways so as to pass without interference. Any such person so operating a motor vehicle shall, on overtaking any such horse, draft animal or other vehicle, pass on the left side thereof, and the rider, or driver of such horse, draft animal or other vehicle shall, as soon as practicable, turn to the right so as to allow free passage on the left. Any such person so operating a motor vehicle shall at the intersection of public highways, keep to the right of the intersection of the centers of such highways when turning to the right and pass to the right of such intersection when turning to the left. Nothing in this subdivision shall, however, be construed as limiting the meaning or effect of the provisions of section 3 of this act.

**Subdivision 2—Brakes, lamps, horn, etc.**—Every motor vehicle while in use on a public highway shall be provided with good and efficient brakes, and also with a suitable bell, horn or other signal, and be so constructed as to exhibit, during the period from 1 hour after sunset to 1 hour before sunrise, two lamps showing white lights visible within a reasonable distance in the direction toward which such vehicle is proceeding, and also a red light visible in the reverse direction.

**Subdivision 3—Local ordinances prohibited.**—Subject to the provisions of subdivision 4 of this section, local authorities shall have no power to pass, enforce or maintain any ordinance, rule or regulation requiring of any owner or operator of a motor vehicle any license or permit to use the public highways, or excluding or prohibiting any motor vehicle whose owner has complied with section 2 of this act from the free use of such highway, except such driveway, speedway or road as has been or may be expressly set apart by the law for the exclusive use of horses and light carriages, or, except as herein provided, in any way affecting the registration or numbering of motor vehicles or the speed at which they may be operated, or their use of the public highways, contrary to or inconsistent with the provisions of this act; and all such ordinances, rules or regulations now in force are hereby declared to be of no validity or effect; provided that nothing in this act contained shall be construed as limiting the power of local authorities to make, enforce and maintain ordinances, rules or regulations, in

addition to the provisions to this act, affecting motor vehicles which are offered to the public for hire.

**Subdivision 4—Parks and parkways excepted.**—Local authorities may, notwithstanding the provisions of section 3 of this act, make, enforce and maintain such reasonable ordinances, rules or regulations concerning the speed at which motor vehicles may be operated in any parks or parkways within a city, but, in that event, must, by signs at each entrance of such park and along such parkway, conspicuously indicate the rate of speed permitted or required.

**Subdivision 5—Application to motor cycles.**—This act shall apply to motor vehicles commonly known as motor cycles, provided that such vehicles shall not be required to affix registration numbers the size of the Arabic numerals of which shall be more than 2 inches in height or the stroke of which numerals shall be of a width more than  $\frac{1}{4}$  of an inch, or to exhibit, during the period specified in subdivision 2 of this section, more than one lamp showing a white light visible to the front or any red light visible in the reverse direction.

**Subdivision 6—No effort on right to damages.**—Nothing in this act shall be construed to curtail or abridge the right of any person to prosecute a civil action for damages by reason of injuries resulting from the negligent use of the highways by a motor vehicle or its owner or his employee or agent.

**SECTION 5—Subdivision 1—Penalties for excessive speed, etc.**—The violation of any of the provisions of subdivision 5 of section 2, or of subdivision 7 of section 7, or of section 3 of this act, or of any ordinance, rule or regulation adopted by local authorities in pursuance of subdivision 4 or section 4 of this act, shall be deemed a misdemeanor, punishable by a fine not exceeding \$50 for the first offense, and punishable by a fine of not less than \$50 nor more than \$100, or imprisonment not exceeding 30 days, or both, for a second offense and punishable by a fine of not less than \$100 nor more than \$250 and imprisonment not exceeding 30 days for a third or subsequent offense.

**Subdivision 2—Penalties for other violations.**—The violation of any other provision of this act shall be punishable by a fine not exceeding \$25 for the first offense, a fine of not less than \$25 nor more than \$50 for a second offense, and a fine of not less than \$50 nor more than \$100, or imprisonment not exceeding 10 days, or both, for a third or subsequent offense.

**Subdivision 3—Release from custody, bail, etc.**—In case the owner of a motor vehicle shall be taken into custody because of a violation of any provision of this act, he shall be forthwith taken before an accessible captain or sergeant or acting sergeant of police in any city or village, or any justice of the peace or magistrate, and be entitled to an immediate hearing; and if such hearing cannot then be had, be released from custody on giving his personal undertaking to appear in answer for such violation, at such time and place as shall then be indicated, secured by the deposit of a sum equal to the maximum fine for the offense with which he is charged, or in lieu thereof, by leaving the motor vehicle, being operated by such person, with such officer; or, in case such officer is not accessible, be forthwith released from custody on giving his name and address to the officer making such arrest, and depositing with such officer a sum equal to the maximum fine for the offense for which such arrest is made, or by leaving the motor vehicle with

such officer; provided that in case the officer making such arrest shall give a receipt in writing for such sum or vehicle and notify such person to appear before the most accessible magistrate, naming him, on that or the following day, specifying the place and hour. In case security shall be deposited, as in this subdivision provided, it shall be returned to the person depositing, forthwith on such person being admitted to bail as provided in section 554 of the code of criminal procedure, and the return of any receipt or other voucher given at the time of such deposit. In case such undertaking with security or such deposit shall not be made by an owner so taken into custody, the provisions of section 554 of the code of criminal procedure shall apply.

**Section 6—Acts Repealed.**—All acts and parts of acts inconsistent herewith or contrary hereto are, so far as they are inconsistent or contrary, hereby repealed.

**Section 7—When this act takes effect.**—This act shall take effect immediately, except that no penalty shall be asserted or imposed for the violation of any of the provisions of section 2 hereof committed prior to 30 days after this act takes effect.

## TENNESSEE MODIFIES ITS LAW

Nashville, Tenn., Dec. 23.—The Powers automobile bill has been amended and has passed the second reading. As introduced, it required every owner to have a license, to pay a tax and to have his machine numbered, in addition to containing speed regulations as well as a number of restrictions about getting out of the way of fire engines and stopping when ordered to do so by the police. As amended it provides that machines must only be licensed when for rent, that the speed limit be 15 miles an hour, and that they must stop when signalled by a policeman.

Last week Duncan Dorris, a local dealer, ran over and seriously injured a woman on Broad street. He was arrested, but was discharged by the police judge. This is the first accident that has happened to a pedestrian since the machines have been in use in this city.

Nashville automobilists are already laying their plans to go in a body to the St. Louis fair during the summer. The trip is slightly over 300 miles and the roads, for part of the distance, are rough; but it is thought that the run can be made easily in 3 days. Duncan Dorris will make the trip to St. Louis in his St. Louis machine shortly after the exposition opens and will map out a route which can be followed by the party. He will also make the trip again later in the season.

An endurance run is under consideration, to be open to all local owners. As planned now, probably twenty-five machines will take part and the route used will be a famous century run during the days of the cycling craze, from Nashville, to Lebanon, to Murfreesboro and back to Nashville, in all a distance of 107 miles. Some of the roads on this route are rough and steep and would be an excellent test of the machine.

An automobile boat is to be built in America for the German emperor. The order was received by Alexander Fischer from the emperor's representative, and the reason given for placing the order in this country was that the best builders here are far in advance of Europeans in their designs of models and construction.

## THE MOTOR AGE "BEAT"

### Its Full Show Report in the Garden 15 Hours Before Any Other— How This Was Done

As far back as the days when Madison Square garden was given over one week each year to immense displays of bicycles, among the trade papers which have by various routes and processes given place to the automobile papers of today there was great competition to "beat" one another to the show and in covering the show. It was good natured, honest competition at the time of the year when trade paper work as a part of the whole work of the trade was most closely noticed. Great printing press and railway races have been run in making and delivering show issues. Many of the old timers of the bicycle game can tell yarns by the hour of how this or that trick was turned at this or that show.

Morton AOK has long made this policy of enterprise its own. During last year it accomplished several notable beats and at the same time worked steadily along the line of consistent plugging week in and week out. Last year its New York show issue was distributed in Madison Square garden before any of the representative New York papers containing full accounts of the show, the only paper to be placed in the garden before it being one that issues regularly earlier in the week and which did not attempt to cover the show in the issue there distributed.

This year—last week—the same thing was repeated. Last year Morton AOK reached the garden Friday morning. This time it reached there Thursday night. Friday and Saturday the New York papers began coming in. Morton AOK, published in Chicago, 1,000 miles away from the show, was there with the best and biggest issue, characterized by the best typography of all the papers, and containing a full account of the show, including a double page half-tone reproduction of the biggest photograph ever taken of a Madison Square garden show—a 12 by 24-inch negative taken by the Burr-McIntosh studio—and was there from 15 to 24 hours before its New York contemporaries.

It is the competition of the old bicycle days ever again—without the competition. Morton AOK expects to be there Thursday morning\* next year, just to compete with itself in the rapid production of big show issues.

At the Chicago show Morton AOK is in its own field and feels able to be the first paper to be distributed at the show with the full show story—it would be delightful, however, to have some New Yorker give it a run for its money. The easterners have the best of it, too, for the clock is set back an hour coming west, while it goes ahead an hour going east.

Last week Morton AOK closed the last of its fourteen forms at 6 o'clock Wednesday morning, having taken telegraph and mail copy from New York up to midnight. The bulk of the work of composition and make-up was done Tuesday afternoon and evening. The bulk of the cut making was done Tuesday. That afternoon between the hours of 2 and 8 o'clock the big double page half-tone cut showing the general view of the garden was made.

Wednesday afternoon at 4:45 o'clock 500

\*This gives a year for you to get started.

copies of the paper had been completed and packed in two trunks; the work of completing the edition was going on at the rate of 1,200 an hour. These 500 copies were whisked away to the Lake Shore depot and just in time to be loaded upon the limited train due in New York at 6:30 the following—Thursday—evening. Other copies for later show distribution were being expressed by the regular route.

The Lake Shore train was nearly 4 hours late, pulling into the Grand Central station at 10:05. Outside the depot a big Peerless car that had been waiting ever since 6:30 stood ready to receive the trunks, which were quickly ferreted out of the baggage car by an induced porter and loaded onto the machine. Thanks to the Peerless and its driver, no time was lost between the depot and the garden, and the papers were inside being distributed by 10:20. The red cover of the occasion quickly caught on and it was only a few seconds before Morton AOK was plainly visible in every part of the garden.

Up in the press room the boys looked it over and the editor of a New York paper said the front page illustration as a sample of three-color printing might have been made a little better. The Morton AOK man replied that it might not be the best three-color job ever printed, but it was a pretty good two-color job.

### WASHINGTON'S GARAGE SCHEME

Washington, D. C., Jan. 23—The Mutual Automobile Storage Co. was incorporated this week under the laws of the District of Columbia to store, sell and repair automobiles and be a general automobile business. The incorporators are S. W. Pickford, Charles T. Richardson, Alexander M. Speer, Jr., and William G. Kinsman, of this city, and Nathan H. Baker, of Laurel, Md. They will also constitute the board of trustees for the first year. The company, which is capitalized at \$60,000, divided into 600 shares of \$100 each, has purchased the vacant lot at Fourteenth and R streets, northwest, and will erect on the property a building to cost \$20,000, designed for a garage. The plans which have been drawn provide for a two-story structure, fronting 50 feet on Fourteenth street by 150 feet deep on R street. It is to be built of brick, steel and cement and is designed to be fireproof. The front will be of gray brick. Elevators and other conveniences usually found in an up-to-date garage will be included. The building will be of sufficient size to accommodate 140 machines.

The scheme of the company is an interesting one. It is proposed that the automobile owners of the city shall be the stockholders and receive the services of the company at cost after deducting expenses and salaries of officers. All automobilists are to be asked to take shares. The contract for the company's garage has been let and it will be begun immediately and it is expected that the company will be in full swing within 3 or 4 months.

The Central Automobile Storage & Repair Co., at present located in Summer court, is negotiating for a large building in the fashionable residence district and if successful it will open a modern garage. Manager Duff has been practically assured of the building and is laying his plans accordingly.

The local branch of the Pope Mfg. Co., on Fourteenth street, is in the hands of a large force of workmen who are making a number of alterations.

## NOW IT IS "ENERGINE"

### New Explosive Fuel Claimed to Be Odorless and Much More Efficient Than Gasoline

Cleveland, O., Jan. 25—A new automobile fuel, claimed to be odorless and of 80 per cent greater efficiency than gasoline, will be placed upon the market within the next 60 days by a Cleveland company just incorporated under the name of the Engerine Co. If all claims are true the new product may bring about a solution of the problem of obtaining a high power fuel without disagreeable odor. The company will erect a refinery in this city and will refine from crude petroleum a product to be called engerine. Several of the local manufacturers have tested the product in cars, and declare that it bears out the claims of its originators as an odorless fuel. It is stated that 1 gallon of the fuel has carried a heavy touring car 18 miles, while the same quantity of gasoline carried the same car but 10 miles. The Engerine Co. was incorporated last week with a nominal capital of \$10,000 by R. P. Beardslee, Frank B. Many, George G. Whitcomb, George H. Kelly and F. B. Williams. Thomas K. Wright of Detroit is president of the company, and Frank B. Many, Cuyahoga building, Cleveland, is secretary and treasurer.

A new automobile ordinance was introduced at the last meeting of the city council. It reenacts the former ordinance with but one change—the insertion of a clause to the effect "that all automobiles shall be operated in a careful manner, and in a manner not to unreasonably inconvenience any person." This clause was inserted to prevent the careless driving which has become somewhat common among a certain class of motorists of late. The present ordinance provides that certain speeds shall not be exceeded in certain parts of the city, but nothing is said relative to careless or reckless driving.

Certain bills regulating the use of automobiles will doubtless be passed in the state legislature now in session and already several measures have been introduced to regulate the use of the new machine. Representative Bassett of Toledo has introduced a measure to require motorists to stop upon signal of drivers of horses. A penalty for not doing so is a fine of \$50. A similar bill has been introduced by Representative Roll of Warren, who makes the penalty \$100.

George Collier, secretary of the committee in charge of the automobile show which is to be held here under the auspices of the Cleveland Automobile Club, the week of February 29, states that he closed several contracts for space while at the New York show last week, and that practically all the available space has been taken. The Cleveland show will be larger and more representative than it was last year from the fact that the White Sewing Machine Co., Baker Motor Vehicle Co., Peerless Motor Car Co. and several other concerns which did not exhibit last year will show their lines this year through their branch stores or local agents. The show loses somewhat through the fact that the tire manufacturers who are members of the national association will not exhibit, but this deficiency will be offset by the increased number of material producers who will show their lines. The list of exhibitors is as follows:

Ohio Motor Car Co., Cadillac and National cars; F. B. Stearns Co., Stearns; Winton Motor Carriage Co. branch, Winton; Berg Automobile Co., Berg; Geneva Automobile & Mfg. Co., Geneva; H. S. Moore, Star; Chisholm & Phillips Automobile, Peerless and Knox; Automobile Garage & Repair Co., Preakard and Autocar; R. T. McGoon, Pope-Toledo; White Garage, White; Price Bros. Carriage Co., Baker; Paul Gneith, Gaethmobile; Hascombs Boat Co., launches; Ohio Oldsmobile Co., Oldsmobile; J. W. McCrae, Royal; Whitcomb Automobile Co., Rambler and Ford; National Carbon Co., batteries; Twentieth Century Mfg. Co., lamps; Veeder Mfg. Co., specialties; Hussey Drop Forge & Mfg. Co., forgings and specialties; Badger Brass Mfg. Co., lamps; Continental Caoutchouc Co., tires; Gray & Davis, lamps.

#### RETAIL PRICES REDUCED

Hartford, Conn., Jan. 25.—Price reductions were announced by President Budge, of the Electric Vehicle Co., following the conference with sales managers from important cities. The new 35-horsepower, four-cylinder car which was listed at \$5,000 during the New York show, has been put in competition with the \$4,900 cars. Mark XLIII will be sold for \$3,500 instead of \$4,000. Managers of sales offices, Jones of Chicago and Neff of Boston, with staff members were present Monday and Tuesday and inspected the works of the company. Superintendent James Joyce, of the factory, said to a Motor Age man today that there was work enough in commercial and pleasure vehicles to keep the big shop working overtime to July first. The work is coming along fast, he says, and he does not anticipate delays in delivery.

The first 1904 unlicensed car to get into Hartford with an agency is the Rambler. Lou Elmer, the old bicycle salesman and the former partner of Bob Alexander, has removed the sign "bicycles" from his Main street store and hung up "Rambler automobiles." He arranged for the Hartford agency at the New York show. Brown, Thomson & Co. handled the car last season and sold a number of them, the car giving satisfaction. Elmer has a fine store for the sale of cars and will have the full line of Ramblers on display in a short time. He has not decided whether or not to take on any other unlicensed cars, but is inclined to confine his attentions to this one line.

#### FORM TECHNICAL CLUB

A society of automobile engineers was organized Tuesday at the Hotel Navarre, New York. There were ten men present and it was decided to form the society for the interchange of technical automobile knowledge. Meetings will be held quarterly and papers on mechanical topics will be read. The membership will consist of an active class for registered engineers, and an associate class for members interested in automobile construction, but who are not registered engineers. There are already about fifty applications for membership. The following officers were elected: President, A. L. Riker, Locomobile Co. of America; first vice-president, Henry Ford, Ford Motor Car Co.; second vice-president, John Wilkinson, H. H. Franklin Mfg. Co.; secretary and treasurer, E. T. Birdsall, Standard Automobile Co.; membership committee, A. H. Whiting, Edison Battery Co., A. L. Riker, L. I. Gibbs and E. T. Birdsall.

## RESTORE MISSION ROAD

### Californians Expect a Grand Stretch from San Diego to San Francisco, Nearly 1500 Miles Long

San Francisco, Jan. 19.—At a meeting of the Automobile Club of California the question of good roads was discussed and the governors passed a resolution endorsing the restoration of the ancient highway known as El Camino Real, or the King's highway, from San Diego to San Francisco. Southern California is very much interested in this project and a convention will be held in Los Angeles January 30 to discuss the matter. The convention has been called by the Los Angeles chamber of commerce and consists of the board of trade, county surveyors, the Landmarks Club and the Los Angeles highway commission. Their efforts will be to build a boulevard from San Diego to Santa Barbara and it will be left to northern California to continue the road to San Francisco. The Automobile Club of California is taking an active interest in the matter and a similar convention will undoubtedly be called in San Francisco. The old mission fathers not only selected their locations with wisdom and foresight, but they chose the easiest route for building the roads from mission to mission. In the desire for straight lines these routes have not since been followed, and if El Camino Real is restored it will afford a most delightful tour from San Francisco to San Diego. If such a road is completed there will be stopping places all along, and the road will be used not only by automobilists, but by vehicles of all kinds. An eastern traveler coming to San Francisco can by easy stages see the most delightful parts of California and carry back with him favorable impressions of the country between San Francisco and Los Angeles.

When the automobile was first introduced in this city the motor car owners certainly had their share of the trouble with transportation companies. All were prejudiced against them and the A. C. of C. had many a fight on hand. At present the Automobile Club has presented J. Krattschnitt, Manager of the Southern Pacific railroad, a petition asking him to modify the present rule which prohibits the transportation of automobiles on the regular ferry boats. This petition has not as yet been acted upon, but strong arguments have been brought to bear and it is confidently believed that increased privileges will be granted in the near future, and as soon as the Southern Pacific lines act in the matter there is no doubt that the other ferry lines will make the same concessions. This will be an important gain to automobilists, for at present there is no way to reach San Francisco from Oakland between 4 and 8 o'clock in the evening.

The Mobile Currence Co.'s automobile house and garage, having a frontage of 137 feet on Golden Gate avenue, 120 feet on Gough and Jefferson park and 137 feet on Elm avenue, was commenced a few days ago. The salesroom and garage are free from posts. The salesroom occupies a space of 45 feet on Gough street and 90 feet on Golden Gate avenue. Posts are placed in the dividing line between the salesroom and the garage and the whole roof is trussed on these posts. This arrangement gives the garage space in L shape of 50 by 137 feet and 50 by 90 feet without a post or obstruction of any kind. The building is

being constructed of glass as far as possible, using only posts and columns on the outside sufficient to support the roof and windows. The exterior is to be pure white. The building will be completed and occupied between February 15 and March 15.

J. D. Harp, of Modesto, Cal., is about to receive the automobile which he is having made to order in San Jose, 50 miles south of San Francisco. This will be the first automobile of the kind ever made, as it will have power applied to all of the wheels, both front and rear. Letters patent were issued to Mr. Harp some time ago on this invention.

#### THE A. M. L. ASSEMBLY

The first convention of the American Motor League was held Tuesday afternoon of last week in Madison Square Garden. The meeting was opened by President Isaac B. Potter, who told of the work the organization is doing in the direction of securing better highways, erecting guide posts, danger signals and publishing tour books. Martin Dodge, director of the United States Bureau of Road Inquiry at Washington, said among other things that the question of good roads was not a party issue, but an all-absorbing matter for the country at large. Other speakers were R. W. Richardson of Omaha, Neb., secretary of the National Good Roads Association; Frank D. Lyon, representative of the state engineers' department at Albany; James R. MacDonald, known as the Macadam of America, who is the highway commissioner of Connecticut; James W. Abbott of Denver, the western representative of the government road inquiry bureau, and Augustus Post, who spoke of good roads from the standpoint of an automobilist. There was also a talk on the roads of the New World, illustrated with stereoscopic views by M. O. Eldridge, chief assistant of the government road inquiry bureau at Washington. The convention adjourned to meet in Chicago.

#### WORKING FOR GOVERNMENT AID

Washington, D. C., Jan. 24.—Representatives of the National Good Roads Association will meet in Washington this week for the purpose of devising some plan to submit to the congressional committees regarding national aid in the construction of good roads. R. W. Richardson, secretary of the association, is already on the ground, and in a talk with a Motor Age representative said: "We are coming to Washington to present our claims for national aid in the construction of good roads to congress. The principle of government aid of internal improvements has become fixed. There should be no reason why the government contributes to the improvement of rivers and harbors and denies help to good roads. At the national good roads convention, held in St. Louis last year, a resolution favoring national aid in the good roads movement was adopted, and a committee of one member of the association from each state was appointed to meet in Washington to press the matter before congress. Representatives will be present from nearly every state in the union. The meeting will be devoted to a general discussion of methods for securing and applying government aid in the construction of good roads throughout the country. The good roads sentiment is growing steadily and the automobilists of the country have done not a little toward pushing the movement."

## ASSERTS PRIOR INVENTION

### Paris Automobile Paper in Reviewing the Selden Patent Situation Tells of the Invention, Construction and Use of a Hydro-Carbon Car with a Disengaging Driving Clutch in 1862

The suits brought by the Association of Licensed Automobile Manufacturers against alleged infringers of the Selden patent having been extended to importers of foreign made cars, the European trade is naturally more or less exercised over the situation, and the automobile papers of France are full of the topic. The views expressed are mainly combative. One of the most comprehensive articles reviewing the situation from a French standpoint, is that written by George Prade in *l'Auto*. While the writer is evidently somewhat confused in the various steps leading to the formation of the A. L. A. M., and the scope of that organization—which he apparently considers as a body taking in all American makers and some importers with the sole purpose of wallowing other importers—it brings out several interesting points concerning the validity of the Selden patent, and especially the priority claims of one Lenoir, a Frenchman. The translation is as follows:

"Much has been said of late about the famous Selden patent, in whose name an American syndicate hopes to prevent the importation of these foreign-made cars, the importers of which have not paid fees to the members of the syndicate. It must be recognized that this patent has been talked of in all directions without telling us once after all this famous patent consists of, for, after all, one is not granted a patent on an idea, but upon material means of realizing the idea.

"We have studied the Selden and Lenoir patents. Herewith is our examination of the first named: The five drawings which are taken from the American patent register, give a fair idea of what the Selden vehicle was if it was ever constructed and if it worked, which is not at all certain. Application for this patent was made October 18, 1879. It is based upon a vehicle with compressed air motor.

"It is in the manner of transmitting power by means of two pinions, one of which is fixed on the motor and the other on the driving wheel on which the principle of the validity of the Selden patent has been based; in other words, upon the mechanical possibility of rendering the motor independent of the driving wheel.

"There is nothing in the Lenoir patent about this to our knowledge, but we have in our possession a letter from workmen in the Lenoir house, which is decidedly explicit on this point. There was a starting arrangement on the Lenoir vehicle in May, 1862, 17 years before the Selden patent was applied for.

"The value of the Selden patent is thus based upon very little, if upon anything at all. Furthermore, it has had no influence upon automobile construction, because it was in Cannstadt, Germany, that Daimler took up the question without even knowing of the existence of the Selden patent.

"In the judicial point of view, it is not the same. The case was taken up with a care and a science of the rights and of the spirit of American rights. An emissary came to Europe in 1898 to make an investigation regarding the dates of the European patents,

and we remember that Viscount de Morlhon, then secretary of the Automobile Club of France, introduced the visitor to us. After the investigation was completed, a great syndicate was formed at the instance of the manager of the Electric Vehicle Co. Its purpose was the acquiring of the Selden patent and the renewing of its rights for a new period.

"The patent was either void or was so complicated as to require judicial adjustment. In the first case, nothing could be done. In the second, one might immediately run upon a rock. A lawyer opposing the patent would not have been wrong in stating that it was rather weak, without importance, and without practical consequence; that it would damage a great many American workmen and ruin many American factories. So it happened that, instead of this, a syndicate of the principal manufacturers was formed, whose representatives could have spoken, for instance, like this: 'You risk very little, and on the contrary you may hope that if we organize we will stop foreign importations by claiming priority of American patents, so as to save American factories.'

"But we must believe that the Selden syndicate, or rather the Association of Licensed Automobile Manufacturers, to call it by its right name, had no extreme confidence in its rights, for its only case was in an obscure American section, where a judge rendered a decision favorable to it. The syndicate had thus in 1902 a case decided in its favor. It could have begun prosecutions then, but did not do so.

"What it then feared from the principal American manufacturers, it now fears from the agents of European automobile manufacturers.

"The principal importing agents were then visited and something like this was told them: 'Come into the syndicate. What can you lose by it? Becoming one of us you will pay to yourself part of the profits, and you will gain by it; on the other hand, inasmuch as you participate in the profits of the Selden syndicate, you prevent the importation of automobiles through other channels than yours and you are sure that you exclusively will receive the profit.'

"Then the licensed automobile importers were organized.

"One could thus in this country of over-protective protection, present the defense of the Selden patent, formerly ignored and lost. The principal manufacturers and importers were thus interested in recognizing the validity of the patent which they would have contested and defeated without difficulty.

"When a new case comes before the court or an appeal from the decision in the case of 1902 no American voice can be lifted against the Selden patent in the name of American interests. The work is well done, but will we let ourselves be beaten? There is an international right, and if the Selden patent dates from 1879, it must be said that before Daimler, of Germany, France had Lenoir, with his patent, dated March 22, 1860, while in May, 1862, the first Lenoir vehicle with a starting

device or clutch was in operation in France."

The article then quotes Lenoir's patent description of his engine, which was an electrically ignited, slide valve internal combustion motor. Following the resume of the patent the writer continues:

"Whatever might be the scope of the Selden patent, it is certain that the principle of the explosion motor is entirely in the Lenoir patent, whereas it is not in the Selden patent. It is evident that Lenoir's motor is a simple steam motor which is transformed into an internal combustion motor, and in it Lenoir has given the world the carburetor, the electric spark system of ignition and the governing of the motor speed by the regulation of the exhaust valve. The motor is thus well established.

"As early as 1860, the clutch was known to the industry. Did Lenoir apply it to the automobile before Selden? The following letter shows it in an irrefutable way:

"Pontoise, March 20, 1899—Captain Ferrus, Vincennes—I have received your favor of the twenty-fourth inst., and we hurry in sending you the information asked for. I say we because there is in Pontoise one of my relatives who was employed at the Lenoir motor factory from 1861 until 1869; thus both of us can give you valuable information. The four-wheel Lenoir automobile was made in 1862. It had a motor which had not been made for it, being a horizontal motor of only one cylinder. It had a fly-wheel which had a diameter of at least one meter. There was great difficulty in placing the motor on the car, and Lenoir placed it on the side, so that it did not lie on its natural base. In this position the axle was vertical, and in this way the fly-wheel was flat, towards the bottom of the car. There was a counter shaft placed under the floor and driven by two bevel pinions with l'embrayage—a disengaging clutch. This shaft also had a pinion with a chain driving a wheel on the hub of the rear road wheels. The carburated air for the motor was drawn from over liquid kept in a tank which was slightly warmed. The first journey of the vehicle was made on a Sunday. Lenoir drove the car himself and came very near having a severe accident in coming out of the shop, because he turned too short and ran into a wall. With him were two men, the two mechanics who had assembled the machine. The application of the Lenoir gas motor was a complete success on the car and also on a boat."

"The writers of this letter are Goriot, former superintendent of the Lenoir motor factory, and Pinotot, a former foreman in the same factory, both residing in Pontoise, France, at the time they gave the information, which was in the shape of an affidavit.

"There is no doubt that the principle of the internal combustion motor has preceded the Selden patent, and there is no doubt that the general principle of the clutch, which was then known, was applied by Lenoir many years before the Selden patent was taken out."

### AFTER COAST TO COAST RECORD

B. R. Holcomb, who drove a Columbia car from Chicago to New York in 76 hours, is preparing to make a trip from San Francisco to New York and attempt to establish a new record for the transcontinental journey. It is the intention to start from San Francisco about June 1, and run the car day and night until New York is reached. Holcomb is of the opinion that the trip can be made in 400 hours.

## NEW AGENCIES MADE

## New York Show Results in Establishment of a Quartet of Retail Automobile Stores

Buffalo, N. Y., Jan. 25.—The Buffalo trade was well represented at the New York show last week, and almost every car of importance shown there will be sold in Buffalo. In some cases competition was very keen in securing agencies. Not only those interested in the trade, but a great many of the automobile club members journeyed to the metropolis and a few orders were placed for large cars. As a result of the show there will be four more retail dealers here.

The Columbia Motor Vehicle Co. has secured options on three stores, and will be located some time this week. Walter M. Mounts is the secretary and treasurer, and Stephen L. Stone is the sales manager. The latter is by no means new to the local trade. He was the right hand man at the Jaynes Automobile Co., and severed his connection with that house January 1. The Columbia concern has secured the agency for the Electric Vehicle Co.'s full line of gasoline and electric cars, and for the Pope-Hartford.

C. M. Babbitt and F. H. Denny formed a co-partnership the last day of the show and took the agency for the Wolverine touring car. They are not yet located.

D. W. Sowers closed for the Vehicle Equipment Co.'s full line and also for the Berg, Ephraim Bros. took on the Elmore agency.

The Auto-Car Equipment Co. is the name of a new concern recently incorporated here with a capital of \$50,000. The directors are John B. McCormack, George W. Atterbury and Elmer B. Olmstead. It is said that the company has received an order for fifty twenty-seat electric buses for a St. Louis concern.

P. W. Eigler, 649 Main street, has added the Eldredge to his line. G. H. Poppenger, 672 Main street, has taken the agency for the Queen.

The Duquesne Motor Car Co. of Buffalo, is removing its plant to Jamestown, N. Y. The capital stock of the company, which was originally \$50,000, has been increased to \$300,000. The plant of the Straight Mfg. Co., at Jamestown, has been purchased. This is well equipped, inventories at \$86,000, and includes a water power dam and rights of 120 horsepower. The capacity of the plant is sufficient to turn out 500 cars per season. The Manufacturers' Association of Jamestown have given a cash bonus of \$5,000, a plot of ground adjoining the present plant to meet future needs; and the company is also given the use, for a term of years, of the Jamestown racing park, which is near the plant, for testing purposes.

The officers of the new company are: John A. Donaldson, secretary of the Erie County Bank of Buffalo, president; LeRoy Pelletier, vice-president; J. C. Lillibridge, secretary-treasurer; and C. H. Stolzenbach and John B. Ester, directors.

## RECENT INCORPORATIONS

Buffalo, N. Y.—Auto-Car Equipment Co., capital stock \$50,000; to make and sell cars, carriages, wagons and other vehicles propelled by steam, gasoline, electricity and other kinds of motive power. Directors, John B. McCormack, George W. Atterbury, Elmer B. Olmstead.

Chicago—Hayden Automobile Co., capital stock \$10,000; object, manufacturing automobiles and motor vehicles. Incorporators, Howard W. Hayes, Robert W. Dunn, James B. Devitt.

Cleveland, O.—The Clark Carliorette Co., capital stock \$25,000; automobile supplies. Incorporators, Erasmus D. Sawyer, George H. McKay, Edward L. Root, Clarence T. Snyder, W. H. B. Cromwell.

Toledo, O.—The Toledo Motor Car Co., capital stock \$20,000; to manufacture automobiles. Incorporators, Harry E. Klag, Harry W. Lloyd, Charles F. Chapman, Jr., Frank W. Coughlin. Racine, Wis.—Mitchell Motor Car Co., capital stock \$300,000. Incorporators, William Mitchell Lewis, George Vernon Rogers, William T. Lewis, Thomas M. Kearney and Harvey E. Redman.

Washington, D. C.—The Mutual Automobile Co., capital stock \$60,000; to store and repair automobiles on the mutual plan. Incorporators, Samuel W. Pickford, Nathan H. Baker, Charles T. Richardson, A. M. Speer, Jr., William J. Kinsan.

New York—Homan & Schulz Co., capital stock \$20,000; manufacturing automobiles. Incorporators, F. D. Homan, T. S. Schultz, Edward Miehling.

## GORDON BENNETT MATTERS

According to cable advice the racing committee of the Automobile Club of France has decided that the French trial race shall be held over the roads of the circuit de l'Argonne, in the French Ardennes. The start will be made near Sedan and other towns made famous by the Franco-Prussian war will be passed. The distance of the race will be about 90 miles and will probably be covered three times.

A meeting of members of automobile clubs of Germany and Frankfurt, as well as of government officials, hotel keepers and others interested in the international event, was held in Frankfurt January 10. One of the principal topics discussed was that regarding hotel accommodations. Dr. Marx, mayor of Hamburg, stated that in his city and in the surrounding towns every available room has been sold. An appeal will be made to all the hotel keepers of Frankfurt, Hanau, Offenbach, Naumburg, Wiesbaden, Mayence and Darmstadt suggesting moderation in price and pointing out that it would very likely result in many of the foreigners returning. So far no arrangements have been made for the representatives of the press, and a Paris paper has already protested about this.

Since the meeting held January 10 a holding committee has been formed. All inquiries regarding accommodations should be sent to Mr. Christ, 29 Oederweg, Frankfurt-on-the-Main. The committee urgently requests prospective visitors not to wait until the last few days, as it is almost certain that no accommodations will then be obtainable in the neighborhood of the start of the race.

Angiers, the European mile record holder, will drive one of the Belgian Pipe cars. Werner and Braun will drive two of the Austrian Mercedes cars, while for the third Willy Pöge may be secured if the German Daimler company consents.

Several tumultuous meetings of the German Automobile Club's racing commission have taken place regarding the selection of the road for the trial events. It is asserted that some influential members of the German club will bring matters before the emperor.

## QUAKERS' SHOW OPENS

## Three Dozen Concerns Exhibit All the Prominent Automobiles and Latest Parts in the Market

Philadelphia, Pa., Jan. 25.—After a strenuous day's work preparing the Second Regiment Army building, the third annual Philadelphia automobile show opened tonight with a generous attendance of automobile cranks, society people and tradesmen from nearby towns. Especial pains to make a handsome show had been taken in the matter of decorations of the building and the exhibit spaces as well. Of the original sixty-nine spaces laid out, all were occupied, while four other exhibitors, late comers, were squeezed in whatever room could be found. Predictions are made that a year hence a considerably larger building will be needed to supply the necessary space for the annual show.

Almost every car inside the building had its counterpart on the street doing demonstration work, and Philadelphians who had had nothing more to do with automobilizing than to dodge were given their first taste of motoring. The exhibitors were chiefly local agents, the list being as follows:

- A. E. Maltby—Winton.
- Banker Bros. Co.—Pierce, Peierless, Autocar and Stevens-Duryea.
- Keystone Motor Car Co.—Baker, Haynes-Apperson, Santos-Dumont, Phelps, Northern, Reber and Putz-Finch.
- German and French Automobile Industry—Benz, Mercedes, Panhard, de Dion-Bouton and Renault.
- Pope Mfg. Co.—Pope-Hartford, Pope-Triumph, Pope-Waverly, Rambler motor cycle.
- Huckmobile Co.—Huckmobile.
- Knox Automobile Co.—Knox.
- W. W. Gawthrop—Elmore and Yale.
- Jones-Corbin Co.—Jones-Corbin.
- Dalsimer Automobile Co.—Crest and National.
- H. S. Lane Motor Car Co.—Orient, Packard and Rambler.
- Manhattan Storage Co.—Tosley steam.
- Harper Automobile Co.—Stanley steam.
- Jacob Reed's Sons—Automobile clothing.
- Charles Krauss—Indian motor cycles.
- Pennsylvania Electric Vehicle Co.—Columbia and Cadillac.
- Keystone Willow Ware Co.—Automobile baskets.
- De Laski & Thropp Circular Woven Tire Co.—Automobile tires.
- A. Krums—Foreign and domestic automobiles.
- Mayo Dumper Co.—Motor cycles.
- Reeser & McKenzie—Motor cycles.
- J. L. Gibrey & Bro.—Automobile tires.
- H. Allers & Co.—"Solarine."
- Rose Mfg. Co.—Severest lamps.
- American Barracoe Automobile Co.—Darracq.
- Diamond Electric Co.—Electric connections and charging stations.
- H. B. Hart Co.—Eldredge.
- Wall & Ochs—Automobile glasses.
- Ruby & Co.—French accessories.
- Twentieth Century Mfg. Co.—Automobile lamps.
- Emil Grossman—Automobile tires, lamps and parts.
- Automobile Club of Philadelphia.
- Berg Automobile Co.—Berg.



# AMERICA'S FIRST AUTOMOBILE SCHOOL

Boston, Jan. 26.—Ever since Boston realized the full value of the motor vehicle she has unhesitatingly taken a deep and active interest in all matters pertaining to the automobile, and in more than one particular has she proven herself to be in the vanguard. This is most fittingly demonstrated by the establishment during the past winter of the first automobile school in the world, in which the pupil receives a practical as well as theoretical knowledge of the steam, gasoline and electric automobile. Automobile schools have been established in European cities, but so far as can be ascertained these schools were for the sole purpose of instructions in operation, and not in the drafting of designs, the study of the motor from every point of view such as is the case in this school, established by the Boston Y. M. C. A. during the early fall.

The Y. M. C. A. in an educational manner has done considerable good work in other lines, and when it was seen that there was a great future for the motor car in this country, Educational Instructor Speare realized the value of such a course of study as has been undertaken and which so far has proven most successful. Enlisting the support and influence of such men as Colonel James T. Sontter, then president of the Massachusetts Automobile Club; George H. Lowe, of the White Sewing Machine Co.; A. F. Neme, then connected with the Waverley company; Isaac H. Davis, of the Crest Mfg. Co.; Dr. W. G. Chase, of the Y. M. C. A., and G. S. Hathaway, of the White company, as an advisory board, the course of studies was outlined and the brightest minds of the automobile world secured as lecturers and instructors. No special line of carriage was taken as a model, but instead all styles and characters were accepted as subjects of consideration.

The result has so far been decidedly satisfactory to the promoter of the school, and there is every reason to believe that a wealth of good has been accomplished. A student, however, who desires to perfect himself in every one of the several lines of study has necessarily to give to it no small amount of his time, especially when it is known that classes meet four nights each week for some particular line of study.

The pupils who have taken advantage of this course represent in the main ambitious workmen, who, seeing nothing more than a slave's life in this business, are endeavoring to fit



MOTOR AGE

CLASS IN TRANSMISSION

themselves to be able to accept responsible positions in workshops of automobile concerns.

In the present gasoline class there are two students from distant points, one from Kansas City and the other from St. Louis, while men from every one of the New England states are likewise to be found among the pupils.

In the study of the automobile the subject is approached from four different points—the technical at the lectures, the practical in the shop course, the drafting, and the actual operation.

In the lecture classes some eminent authority explains the theory of the automobile, being assisted by blackboard drawings and often by models of the engine or other part under consideration. So clear and practical are these lectures that it would be difficult for the student to misunderstand the explanations. Each student is provided with a card containing a list of every single part that goes to make up an automobile, and as soon as he clearly understands the purport of the same he crosses that off his list and goes along to the next one. This idea is carried throughout the course. The courses embrace every style of machine, engine, single and multi-cylinder, the cars used in the school being the Winton, Peerless, Cadillac, Crest, and Toledo in the gasoline, being considered as representative cars, containing the many different features to be found in gasoline vehicles; the White, Stanley and Mason steamers, being compound and single

engines, and in the electric the Waverley, Studebaker and the Electric Vehicle cars. The instructors have been a New York mechanic on gasoline, Parker H. Kemble on steamers, and J. Arlington White on electric vehicles, all men of experience.

The shop course perhaps offers the greatest advantage to the student, as it places him in direct connection with the vehicles both assembled and in parts, and furthermore brings him in touch with the men who are daily handling and driving automobiles. An illustration of this shop course was given at the Winton garage Wednesday evening last, and no better opportunity will ever be presented to the students to inspect every part of a machine. Harry Fosdick had placed his building and stock at the disposal of the school, and so intelligently was the display made that the pupils were able to secure a thorough understanding of every part of the car and engine.

In this display or exhibit, whichever it may be called, Mr. Fosdick had arranged several groups under their different heads. Near by stood sectional bodies, which showed the tanks, as well as the system of cooling. Another showed the engine casing, with the water pump. Still another chassis showed the running gear construction, front and rear axles and differential, the chassis being mounted, so the working of the differential could be seen and fully explained. Still another chassis was completely assembled, showing the workings of every part. Near each chassis was displayed on benches the individual parts of the engine, transmission, running gears, radiators, and in fact all component parts of the car, so that they could be inspected both in and outside the chassis.

The class in charge of Dr. Decker was divided into squads of ten each, and these squads were given half an hour or so to become familiar with the different exhibits. Later the entire class was assembled and witnessed the actual demonstrations of a 1904 Winton chassis operated by Mr. Fosdick. Later in the month the class will visit the garage of the Peerless company.

Another course is the one given over to drafting each Friday evening, the class being under the control of George E. W. Armstrong. Saturday nights the class meets at the Y. M. C. A., and is asked questions regarding the subjects studied during the week. At the close of each of these courses the student is



EXAMINES MOTOR PARTS



MOTOR AGE

IGNITION AND CARBURATION DISCUSSED

given a written and an oral examination, and if he displays the necessary proficiency in each branch, is given a diploma which it is believed will prove of value to him.

Tonight too gasoline cars was again considered, the lecturer dealing with current practice in runabout and touring car construction. It was pointed out that while the American runabout is a unique and characteristic product, the American touring car is merely a copy of the French model. In running gear construction the angle iron frame, with elliptic or half elliptic springs, is the common form of both classes of cars, although there is some use made of the three-point suspension and of side springs in one or two well known makes. It was remarked that the roughness of American roads calls for the highest degree of flexibility in running gears and also for a long wheel base, and our rutted roads also demand a uniform gauge in motor vehicles.

The tendency toward the use of larger wheels, particularly in the touring cars, was

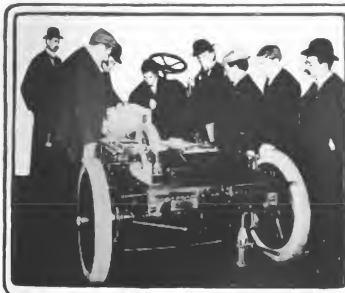
circulating system, with radiators even in the case of the cheapest runabouts. On touring cars a cellular radiator is occasionally used, but its employment is not likely to become general. Air cooling of engines of moderate size seems to be on the increase. Jump spark ignition is overwhelmingly popular on all classes of vehicles, but there is still a belief in the greater reliability of the contact spark.

The change speed gears of runabouts are commonly of the planetary type, but the touring cars, almost without exception, make use of sliding gears. The separate clutch method, however, is used in quite a number of vehicles of both types. At least three forward speeds are now regarded as essential for the successful operation of a road vehicle.

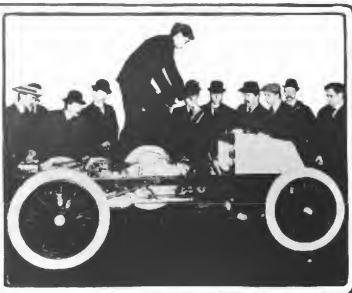
Greater care is taken in the matter of brakes and even the cheap cars are now almost always provided with two independent means for bringing the vehicle to a rest. Engine control in runabout cars is ordinarily by means of a foot-operated throttle and manually operated

as can be learned, this is the first time the journey was ever made in an automobile.

The start was made at 10 o'clock in the morning, the travelers being duly equipped with information regarding the roads as furnished by the oldest inhabitants of Jacksonville. The first stretch of 5 miles was over a shell road, and this was easily made. On reaching Moultrie the roadway changed to sand and then came a few miles of road covered with pine straw. A native volunteered the information that the water was high a short distance ahead and the car was turned back for a few miles and another road taken. On reaching the Kings road a Mr. Sturker told the party the road was impassable from high water, and also that it had been badly cut by logging teams. One other road might be possible, but as there were so many cross roads he was sure the strangers would get lost. As it was getting late and there were still 30 miles to cover before reaching St. Augustine, it was decided to stay over night with the hospital



POINTING THE CHANGE



EXPLAINING CAR OPERATION

noted, and the almost complete disappearance of the wire wheel was spoken of, as well as the tendency toward the use of larger pneumatic tires for a given weight and the general employment of the double tube type. White steering by tiller or side lever is used in some of the cheaper cars, the tendency toward the use of irreversible steering gears is very strong. Although ball bearings are used on some runabouts, the tendency in touring car construction is toward roller bearings, and in quite a number of instances plain bearings are preferred.

The spur differential has nearly displaced the bevel type. The engines of American runabouts are mostly of the single-cylinder type or rarely of the opposed cylinder variety, and are placed near the middle of the body. These have been developed to a remarkable degree of perfection as regards reliable operation and freedom from vibration. Touring car engines are nearly all multiple cylinder and carried in the extreme front of the car under a bonnet. The two-cylinder opposed type is retained, however.

Carburetion is universally effected by means of the float feed spraying type of carburetor. In engine cooling, gravity circulation has finally been abandoned in favor of a forced

spark advance, but throttle governors and accelerators are used on the touring cars. Many runabout engines may be started from the seat and the multiple engines of touring cars are ordinarily considered self-starting under usual conditions. Characteristic American idiosyncrasies are being superseded in the touring car field, at least for the time being, but are holding their own fairly well in the design of light cars.

#### DIFFICULT TOURING IN FLORIDA

A Motor Age representative boarded a train at a Florida town once upon a time, and shortly after taking a seat a big, burly farmer came and sat beside him. The agriculturist was socially inclined and the two were soon engaged in conversation. Directly the farmer turned, and looking his companion squarely in the eye, said:

"Do you live in this here state?"

Receiving a negative answer, he continued in a relaxed tone: "Well, I just wanted to say, I live in Georgia, myself, and I think the roads down here beat hell. They're so slurred poor and contrary that they won't even fork."

With some knowledge of this peculiar and trying condition of Florida roads, William K. Hill a few days ago made a trip from Jacksonville to Daytona with a Knox car. As far

Floridian, as he volunteered to show a way across his land in the morning by which the beach could be reached.

The next morning at 7 o'clock the procession started with Mr. Sturker on his horse as guide. Within half a mile the car was in muck up to the hubs, and it was necessary to get men and planks to get it to hard soil again. An hour and a half was spent in this pleasing diversion. Then followed all kinds of trouble, with more muck, water, palmetto, scrub and wire grass at least 5 feet high. This time the car was so deep in the mud that the guide went back after another horse.

When the guide returned with a mule the car was pulled through the worst of the road by the combined efforts of the motor, the mule and the horse. After a time the heel of a stream with a sand bottom was reached, and although there was nearly a foot of water, the car was run under its own power. From the stream the travelers turned into a palmetto forest, where it was necessary to walk ahead and cut a path. About 2 o'clock the wood-cutting experience was finished and an old road reached which was passable, although it was overgrown with palmetto scrub. It led to the beach, which was hard sand, and the 30 miles to Daytona was made in 2 hours.

## AUTOMOBILE BOATING



MOTOR AGE

THE FASTEST BOAT IN ENGLAND—DOES 22 MILES AN HOUR

### SPEED BOATS IN CONNECTICUT

Hartford, Conn., Jan. 25—E. N. Way, one of the clever amateur yacht designers of the country, has completed in his Hartford office a testing tank, which is very probably the finest one in the country owned privately, and one that realizes the same deductions as are obtained in the more elaborate tank testing apparatus owned by the government and installed in the navy yard at Washington.

With his great tank, which is 18 inches deep, Mr. Way is permitted to deduce the amount of energy required to propel certain models through the water at a certain speed. He can also obtain the result in advance of building, showing which type of hull is fastest with the same given power. The method engaged in is by weights. The method of attaching them to the wooden hulls of diminutive size, however, so that about the same pulling power is realized as in the case of installed power in a larger boat, is more of a trick, but Mr. Way believes he has overcome this difficulty, and that his tests are attended with more or less accuracy.

Mr. Way said he supposed he had cut several hundred models in wood since taking up yacht designing. Formerly he had made but half models and the good points of each had to be calculated. It was more work to cut full models of the boats, but he found that it was possible thereby to determine in a great measure their good points. The tank had taught him several important things in connection with high speed boat hulls, and, though not through with his search for the perfect type, he had found a number that were good and some that were better than others. His task judgment he believes will be vindicated in the building of a boat upon which work is soon to begin.

The prospects are particularly good for a large class of automobile boats for the coming yachting season in Hartford, and it is likely that a special committee will be appointed at the annual meeting of the Hartford Yacht Club in February to take charge of this class of racing. There are so many features entering into the classification of power boats with which the regatta committee does not feel able to cope without special study of the question, that it believes the interests of the club in this direction will be better served with a special committee on power boat racing.

The matter has been discussed at no little

length among the members, who will go to the annual meeting prepared to push the measure through. Of the 350-odd members of the Hartford Yacht Club a great number of them are owners of racing launches and the popularity of the automobile boat is greatly on the increase.

Cups have been offered for competition on both the Connecticut river and in Sound waters, and the announcement of the wish to post the cups has stirred enthusiasm to a high point. Secretary Joseph Merritt of the Hartford Yacht Club and E. R. Clark are to have a 30-foot high speed launch with 75 horsepower, and other fast boats are being planned. E. N. Way has cut models of some fast looking craft, and it is told he will soon lay down the plans for such a boat to be built this spring. The Saunders-Smith Co., of Essex, has an order for a high speed boat of this class and has recently been to New York looking over engines to find one which realizes all the features demanded.

### BOATS AT THE SPORTSMEN'S SHOW

New York, Jan. 25—The sportsmen's show, to be held in Madison Square garden from February 19 to March 5, will show the sudden interest developed in power boat matters since the automobile boat made its debut. As already announced, the center of the amphitheater this year will be given up to a lake 190 feet long by 70 feet in width. The lake will be so constructed as to afford an exhibit space 10 feet in width on either side and at both ends of the lake. Exhibitors of marine engines and launches will occupy this space and will be afforded dock privileges immediately in front of their respective exhibits. The boats to be so exhibited will vary in size from 16 feet to 35 feet in length.

Interest will be attracted to the exhibits of Hollander & Tangemann, representing the new F. I. A. T. boat, and Smith & Mabley, who will exhibit the Vingt-et-Un, these boats having been matched for a race to take place early this spring.

The Gas Engine & Power Co., of Morris Heights, has taken space for an exhibit of a boat which it is now constructing for the show. It promises a surprise in lines, dimensions and power.

Panhard & Levassor, who are also entering this market for automobile boat honors, will make an exhibit. M. Massaroni is especially en-

thusiastic for the outlook of the automobile boat in America and has already secured no inconsiderable amount of business.

In addition to the exhibitors who will occupy booths immediately fronting the lake, a number of others have taken space on the opposite side of the aisle for the exhibit of marine engines and motors, so that, altogether, the marine end of the show promises to represent the largest exhibit of the kind ever held in this country. The list of the exhibitors who have thus far taken space follows: Western Gas Engine Co., Michawaka, Ind.; J. W. Newbury, New York; Pierce Engine Co., Racine, Wis.; C. H. Blomstrom Motor Co., Detroit, Mich.; Lozier Motor Co., Plattsburg, N. Y.; Electric Launch Co., Bayonne City, N. J.; Panhard & Levassor, New York; Eagle Bicycle Co., Torrington, Conn.; Smith & Mabley, New York; Hollander & Tangemann, New York; The Standard Motor Construction Co., Jersey City, N. J.; Gas Engine & Power Co., Morris Heights, N. Y.; W. H. Brodie Co., New York; Lackawanna Motor Co., Buffalo, N. Y.; Charles A. Strelinger Co., Detroit, Mich.; Buffalo Gasoline Motor Co., Buffalo, N. Y.; White Craft & Power Co., Port Richmond, N. Y.; and Fairbanks Co., New York.

### AFTER THE FOREIGN BOATS

Frank Croker, of New York, has just had an automobile boat built at Herreshoff's. This boat has been built from designs by C. F. Herreshoff, and is one of the lightest constructed boats of her size ever turned out. Mr. Croker ordered the boat of Alexander Fischer and it is expected that others will be built like it before the opening of the racing season. The boat is 43 feet long on deck, 40 feet on the water line, 5 feet beam on deck and 4 feet at the water line, and she draws only 6 inches. She does not have the flat, torpedo boat stern so common to fast boats nowadays, but is modeled very like a canoe, with well rounded bilges. The frames are closely spaced and she is double planked with mahogany, a quarter of an inch thick. Between the two plankings cement has been used, which not only keeps the boat tight, but makes it more rigid. The boat will be driven by two Rochet-Schneider motors, each of 24 nominal horsepower.

As soon as completed the boat will be tried in New York waters and if she proves satisfactory will be shipped at once to Monaco to take part in the races on the Riviera. After that she will go to England and probably race for the Harmsworth cup and then be brought back to this country prepared to meet all comers. The speed of this new boat, it is guaranteed, will be 28 miles an hour, and Mr. Croker is so confident of her success that he is willing to make a match for any amount up to \$5,000 a side against any automobile boat that may be built. He stipulates that the rules of the American Power Boat Association shall govern the contest.



MOTOR AGE

THE CRYSTAL, A 25-FOOT BRITISH

## THE READERS' CLEARING HOUSE

### STEERING ARM ANGLE

Indianapolis, Ind.—Editor *MOTOR AGE*—What is the correct angle of the lever arm of a steering knuckle with the spindle of the wheel, when the reach rod is behind the axle, and also when it is in front of the axle? Does the position of the reach rod change the angle of the lever with the steering knuckle spindle? In other words, could the complete set be reversed without changing the steering results? Is there any steering gear, to your knowledge, using the power of the vehicle in steering, whether patented or unpatented? —M. EGAN.

The angle of the steering knuckle lever arm with the spindle determines the steering quality of the car. There are many ways of obtaining it, but all aim to approximate an angle which will produce movement of the two steering wheels whereby when the vehicle is turning a corner, of no matter what radius, center lines projected from all the four wheel axles will coincide. In other words, the assumed correct steering action would result in the projected axes of the front wheels, when turned, striking the projected rear axis at the same point. Whatever the exact angle resulting from any calculation may be, it must be an obtuse angle with the spindle when the reach or connecting rod is behind the front axle, and an acute angle when the rod is in front of the axle, the angles being exactly reversed to secure the same steering effect—that is, if in the former case the angle were 15 degrees greater than a right angle, it would in the latter case be 15 degrees less than a right angle. There have been numerous experiments with power steering, mainly in connection with heavy trucks. The Electric Vehicle Co. made the most recent application of it to such a vehicle. *MOTOR AGE* is not informed as to the outcome of its experiments. Such steering has never proven practicable on light vehicles.

### FLY WHEEL CLUTCHES

Minneapolis, Minn.—Editor *MOTOR AGE*—In the description of an automobile, what is meant by a self-contained fly wheel clutch, and how does such a clutch differ from other clutches? —W. CARPEN.

A self-contained fly wheel clutch is one in which the male and female members of the clutch constitute a complete mechanism, operative without regard for the transmission gear driven through it and connected with it by a universal joint. It may, of course, be distinguished from the older form of clutch in which the male member is a part of the transmission gear so far as alignment is concerned, and hence is interacting with it in the transmission of misaligning strains.

### SCOPF OF SELDEN PATENT

Grand Rapids, Mich.—Editor *MOTOR AGE*—I have, during the past few months, read everything about the Selden patent almost every time I have opened an automobile paper. Of course I understand in a general way that this patent is supposed to be a basic patent for gasoline automobiles. I wish to know, however, in just what way it becomes such.—E. J. BOYNTON.

The Selden patent was published in full in *MOTOR AGE* in its issue of April 2, 1903.

Briefly, the principal claim of the Selden patent specifies the use of an hydro-carbon motor as the propelling medium of a road wagon, there being interposed between the motor and the road wheels a clutch or other disconnecting device by which the motor may be rendered non-operative so far as driving is concerned. One of the principal claims is as follows: "The combination with a road locomotive provided with suitable running gear, including a propelling wheel and steering mechanism, of a liquid hydro-carbon gas engine of the compression type comprising one or more power cylinders, a suitable liquid fuel receptacle, a power shaft connected with and arranged to run faster than the propelling wheel, an intermediate clutch or disconnecting device, a suitable carriage body located above the engine and a flexible or jointed connection between the engine and the body, substantially as described."

### CHANGING SPEED RATIO

Plainfield, N. J.—Editor *MOTOR AGE*—I would like to change the speed ratio of the low speed of my car without affecting the ratio of the high speed. In what manner can this be accomplished? It seems to me that there is not enough difference between the two speeds, for while the car runs well on the high speed under good conditions, I have noticed that hills which it will not climb on the high speed, it can hardly, if at all, climb on even the low speed; this being my reason for wishing to lower the ratio of the low speed.—JAMES DEWBAG.

The change of speed ratios depends somewhat upon the character of the transmission gear. In an ordinary sliding gear set it might be readily accomplished, but in a gear of the planetary sort difficulty in substituting new gears and pinions without also altering the case, would probably be met. The best plan would be to consult the maker of the car. The condition, however, is so unusual, that it is barely possible that something besides unsuitable speed ratios is at fault in the inability to climb hills.

### AIR-COOLED MOTORS

Dubuque, Ia.—Editor *MOTOR AGE*—I have noticed that builders of air-cooled motors generally confine themselves to cylinders of comparatively small bore, and that to obtain engines of considerable horsepower they multiply the number of cylinders instead of increasing the diameter of the cylinders. I have also heard that there is a limit to the size of an air-cooled cylinder. If this is true, why is it, and what is the limit?—J. W. C.

The practicability of an air-cooled motor rests upon the efficiency of its heat radiation. This, to a great extent, depends upon the amount of radiating surface. Unless this surface be increased by some peculiar means other than the ordinary ribbing or flanging of the cylinder, it is gauged almost proportionately by the circumferential area of the cylinder. This decreases relatively to the area of the piston, and consequently to the power developed and heat produced, with the increase of the bore. In other words, the ratio of the cylinder wall area to the piston of a motor of 4 inch bore is not so great as in the case

of a motor of 2-inch bore. Hence there is a point in the increase in cylinder diameter at which the cylinder wall area, and consequently the possible radiating area, is not great enough in proportion to the piston area to produce the radiation necessary to obtain satisfactory results in the running of the motor. The limit of piston diameter in air-cooled motors of usual construction is about  $3\frac{1}{2}$  inches.

### ADJUSTING VALVE GEARS

Chicago, Ill.—Editor *MOTOR AGE*—In re-assembling a motor which has been taken apart how should one proceed to adjust the valve cam gearing so that the exhaust valve will be lifted at the correct point in the stroke of the piston? —R. F. G.

To set the valve gearing the piston should be moved outward until it is about  $\frac{1}{4}$  or 5-16 inch from the completion of what would be the impulse stroke. The valve gears should then be so merbed that at this point the exhaust valve would be lifted about 1.32-inch. With this condition effected, the piston should be made to complete its impulse stroke and also the exhaust stroke following. The valve should be firmly seated simultaneously with the completion of the exhaust stroke. If this action is not obtained the gears will have to be changed and another trial made.

### MOTOR CAR TRIMMING

New York—Editor *MOTOR AGE*—The writer visited the show last week at Madison Square garden and naturally, being particularly interested in the dry goods end of the business, paid close attention to the character of the trimming of the cars exhibited. Without depreciating the progress made in other branches of the industry, the lack of knowledge on the subject of trimming was surprising, there being much deficiency apparent in the methods of trimming and in the materials selected.

It would seem, on the face of it, that good trimming material would naturally be used on a vehicle so expensive as an automobile. But this is not the rule, especially in the case of leather. A maker of fine carriages would not think of using cow hide leather; all such carriages being trimmed with morocco, or goat skin. Only three makes of cars exhibited at the garden had morocco upholstery. The cloth used was, also, generally poorly finished. It was noticeable, also, that in finishing tops there was often no lining inside, the car being by this deficiency given a cheap appearance. There seems to be no reason why cloth such as is used for trimming carriages should not be used, especially as it stands all the brushing required. Better still if a suitable satin, which sheds dust more readily. It cut to prove profitable for the automobile manufacturers to follow the methods of the makers of the best carriages and bring the trimming into keeping with the elegance of the rest of the vehicle.—LOUIS DUSENBURY.

### DOUBLE CHAIN DRIVE

Rochester, N. Y.—Editor *MOTOR AGE*—What is the advantage, if any, of the double chain drive in which there is a chain from a cross shaft to each rear wheel?—E. F.

The double chain drive obviates the live rear axle, allowing the differential to be placed upon the cross-counter shaft and allowing the use of a stout, one-piece stationary axle upon which the rear wheels are mounted loosely. This system of construction is especially advantageous in the case of heavy high powered cars upon whose axles there is a great strain.



### SOCIETY AT THE SHOW

Miss Straightfront didn't admire the season's millinery. The fashions in bonnets were too brassy, and the shining steel aigrettes too common to be distinguished. The folds of Russian iron, slashed up the sides, were the same as the year before. No hair line or wide stripe effects were to be admitted and the color schemes were like every other well groomed queen of the road.

"This is no rig to go sparking in," she said. "This mixture of olive green and chrome yellow will make my cylinders explode with laughter. I have no outlet valves for my spent up emotions. Indeed, I am four times tired."

"That's your 'pinion, is it," said Miss Runabout, one of the season's debutantes.

"What a shaft of wit," said a crank, who had just been turned over.

"You ought to put sand on the rail and back up—you're in your second gearhood," replied Columbian, the gem of the ocean.

"Of all the Knox I've ever heard. One would think she was an Olds thing, instead of a Model young lady fresh from the dress-makers and hurried here to the show by the Cadillac tribe of well re(n)a men," returned the White lady.

"The Fiat has gone forth that straight fronts are to be worn this year, and I hurried to get on board," said Miss Loco of Mobile, Ala.

"She moves, she starts," was the purring shot of the Pierce Arrow.

"Don't you know that Longfellow, the one with the 140-inch wheel base, has been tabooed in our set?" inquired the art preservative Ben Franklin.

"I was not referring to him," darted the Arrow. "I meant a belt driven Benz that got stuck."

"Well, bless my chairs, I've been put on the Pan-hard," said the French lady, Miss De Canville. "Mr too," responded the German dowager, Mrs. Danhier Mercedes.

"I've a severe pain in my dome lights, you weary me greatly," said Miss Brougham.

"And the day is so cold my muffler doesn't seem to protect me a bit," ventured a little English body in red. The eccentric miss said she had twice tried to break up her cold, but neither time had her favorite enough mixture worked.

"If you are going to gas about your ills it is pleasant for me to take the short circuit to pleasant subjects," ventured Miss Victoria Elbertie, just out of the Woods, and new to city life. So the conversation changed out of deference to the queen.

"Where have you been?" interrogated the charms, addressing the handsome cab.

"Down to the Battery," ventured the big fellow. "I gum shod up here—on rubbers, to get a peep at this loveliness. My, but you are fresh as new paint," he said patronizingly to Mrs. Haynes Hyphen Apperson, a rich widow from the west.

"Who values your criticism, you all (ig)hter. You've slipped a cog, and you've got wheels. The other day when you stopped suddenly you were off your base." At this snarl from the widow the handsome cab felled up his doors and silently stole away. He went out soon after to get a little grape juice and ebb, dark prison cells was his fate. He became a negative quantity, of that the others were positive.

"The Grout has got a grouse on, an awful one; the Pope himself couldn't relieve his steam congestion," ventured Miss Hartford. "Condensation of the vowels," Doctor Coupe said.

"Still talking of pains—well, you couldn't hardly expect a lot of women to do anything else," said a hurly-burly, healthy-looking truck, who stood sentinel at the exit way. "Now, as I view life through my lamp, I see a hard summer ahead. We've got to carry everybody's load."

"That one of your jokes?" queried the sarcastic Mr. Doubtface Cylinder. "Well," he added, "if you were of my type you could take valuations and short skips on any of your four cycles."

"And what do you think of that?" chorused those present who had exhausted all resources of conversation. The oiling reservoir and the gasoline tanks had run dry. So the big garden slept.

### THE MULE VERSUS THE MOTOR

There are some places where an automobile is inappropriate according to the views of the postmaster of Macon, Mo., who recently received a letter from an anxious rural mail carrier who was seriously considering the advisability of giving the motor car a chance at negotiating his route. The carrier asked the following questions:

"What kind of roads do you have in Missouri? Have you any bad clay hills and swamps? Will the thing run all right through mud and water up to the bed? How much does it set a man back financially? How many horse or mule power is it? My route is 25 1/2 miles; has fifty-three clay hills and four swamps, almost impassable."

In reply the Macon postman wrote: "It is true that one of our carriers made an experimental trip over his route with a 14-horse-power gasoline automobile, but the roads were in good condition. Our roads are mostly earth and in moist weather they are hard to get it very muddy. Under such conditions it seems to be necessary for a driver to have something to which to express his opinion. If his automobile stuck in the mud he might 'reason' with it all

day, and it would have no effect in relieving the man's feelings. With a mule it is different.

"I note with interest that there are fifty-three clay hills and four swamps on your route. If that is the situation, I should advise a flying machine, with a roadbed attachment. You might tunnel under your route. In such case an automobile might go through dry shod. Hearing these suggestions might involve greater expense than you would care to assume, I might venture as the next best thing the famous bird of paradise, commonly called the Missouri mule. A Missouri mule will go where no automobile in the land would dare to tread. He will haul you over these fifty-three clay hills or kick holes through them and go under. Nothing will discourage him. We use 'em on all car routes, and I know. You never have to stop to fix him.

You don't have to take a monkey wrench and a kit of tools along. A good, old crank is the only instrument you will need. There's no danger of his blowing up. Difficult roads only entice him to greater effort. After colliding with a tree or fence or horse the automobile is sent to the junk shop, while the mule is only better and stronger after each collision; it's the thing he runs against that goes to the scrap pile. A mule eats more than an automobile, but he gives greater results. I have written you at length because it is a subject on which I have some feeling. And I know some men absolutely devoid of sentiment who have at least a dozen places of feeling occasioned by an intimate acquaintance with the Missouri mule."

### NEWS MISCELLANY

The king of Italy has sent \$200 to the Touring Club of Italy, for the purpose of purchasing sign-boards.

An Olds railway inspection car has been sold to the Mexican Narrow Gauge Railway and will be used between Laredo and the City of Mexico.

The colors of the contesting machines in the Gordon Bennett cup race next June will be: Germany, white; France, blue; England, green; America, red.

It is rumored that hereafter motor cycles for the German army will be manufactured in one of the large German gun factories under the supervision of the government.

At a recent meeting of the Automobile Club of Switzerland, the first article of the club's regulations, relating to the object of the club, was supplemented by the words: "and to fight against speed excess."

The International Automobile Agency has established an office at 500 Fifth avenue, New York, in connection with a garage and repair shop. Second hand automobiles will be bought and sold and cars will be rented.

The Automobile Club of Utica, N. Y., has been incorporated, and has elected the following directors for the first year: Edward Bushinger, P. DeW. Smith, Robert M. Hunt, Harry H. Mundy and Albert J. Rawlins.

The Milwaukee Automobile Club elected the following officers at its annual meeting last week: President, Rev. J. F. Stankalis; vice-president, Dr. Louis Faldner; secretary, James T. Drought; treasurer, W. H. Tipton; captain, Arthur H. Anger.

The trustee of the Jones Corbin Co. has filed his second account, and a meeting of the creditors to consider and pass upon it will be held at the office of the referee, 228 South Third street, Philadelphia, Pa., on Friday, February 5, at 3 o'clock in the afternoon.

The mayor of Rheims, France, has ordered thirty sign-boards from the Touring Club of France, which will be placed at the corners of the principal roads leading into the town, and at the corners of important streets in the



city. As the speed limit in the principal streets is 8 kilometers—about 5 miles—per hour, while on all other thoroughfares a speed of 12 kilometers—7½ miles—per hour, is permitted, the sign-boards will bear the information.

An endeavor is being made by A. R. Wharton, of Fort Worth, Tex., to organize a series of automobile races in Fort Worth during the meeting of the Texas Cattle Raisers' Association in March. Those interested are requested to write to Mr. Wharton for fuller information.

A meeting of the creditors of the Shelby Motor Car Co. will be held at 10 o'clock, February 4, at the office of Charles H. Keating, referee, Mansfield, O., for the purpose of declaring and directing the payment of a first dividend of not less than 2 per cent upon all debts allowed prior to or on that date.

A club of chauffeurs has been formed in Frankfurt-on-the-Main. Prospective members must be 20 years old and pass an examination showing their ability to handle a motor car. The club's object is to find employment for and look after its members. Fifty-two chauffeurs were admitted as members the first day of the existence of the club.

The park commissioners of San Francisco, Cal., will soon throw open that part of the ocean boulevard from the south drive to the Beach Tavern, thus making easy access to the Cliff House. Park Commissioner Reuben Lloyd, with Superintendent John McLaren, went over the ground recently, and became convinced that this concession to the owners of automobiles would be fair, and he will prepare an ordinance granting the use of this driveway. The speed of the cars will be limited to 6 miles an hour.

Work has begun on a new three-story building at the corner of Thirteenth street and Michigan avenue, Chicago, which will be occupied by the Winton Motor Carriage Co. branch. The exterior of the building will be constructed of white tile and plate glass and the interior will be fireproofed. The frontage on Michigan avenue will be 100 feet and on Thirteenth street will be 130 feet. The first story will be used for a show room and the second and third stories for machine shop and storage.

Mina Alix, the 20-year-old girl who has been looping the loop in an automobile, was seriously injured at Madrid, Spain, January 25, while performing her act. The car left the loop at the top and whirled over and over into the arena. The girl's skull was

fractured and several ribs crushed. The car was broken to pieces. While her injuries are of a serious nature, it was the opinion of the physicians who made a hasty examination that the young lady will recover. Her home is in New York city.

One of the really interesting stories of the recent endurance run is the "Tale of Triumph" booklet issued by the George N. Pierce Co., of Buffalo, N. Y. This is a vivid and graphic description of the endurance run as a whole, with the admirable work of the Pierce cars made especially prominent. The story is written by Victor Speer, of the Buffalo Express, whose daily stories in the Express during the run excited favorable comment from those who participated in the trying experience of the 8-day journey.

A party of hunters in Rambler cars drove into Kiowa, Col., one Sunday morning recently just about the time the minister was getting down to his thirty. The majority of the town people were listening to the sermon, but one observant man heard the noise of the automobiles and went out to investigate. He returned in a short time and reported the arrival of the three cars. The audience began to melt away rapidly, and the minister finally saw the point and the meeting was adjourned so that everybody, including the preacher, could go and take a look at the automobiles.

A German concern recommends the following for mending rubber tires: The tires are first freed from adhering foreign particles and thoroughly dried. The edges of the hole are then painted over with a solution of Para caoutchouc in benzine, a fitting strip of natural rubber being laid over it and a solution consisting of 4 parts of benzine, 3 of carbon sulphide, and .18 part of sulphur chloride is applied to the edges by means of cotton wool tied to a wooden holder, this solution serving to vulcanize and to increase the resistance of the rubber. The joined parts must, of course, be well pressed together.

A proposition has been submitted to the Vienna city council to appropriate \$5,400,000 to buy 3,000 motor carriages at \$1,800 each for the purpose of leasing them to the public conveyance companies at a reasonable percentage and an annual sinking fund. This fund is to pay for the carriages used within 20 years. The originator says the replacement of horses with automobiles will be the means of rendering the city more sanitary. A number of daily papers have commented favorably upon the project, which if carried through will be one of the greatest achievements in the history of the automobile trade.

The Automobile Club of Germantown, Pa., has had plans prepared for a new club house which will be erected as soon as a suitable site is agreed upon. The building will be a two-and-a-half story structure in Spanish style, of brick and stone, and will cost about \$10,000. It will have storage room for twenty-five automobiles, a repair shop and a reading room for chauffeurs on the first floor, and there will be a ballroom, café, billiard room, smoking room, locker room and bowling alleys in the upper stories. The officers of the club are: President, Prescott Adamson; vice-president, H. W. Butterworth; secretary and treasurer, Robert P. Hooper.

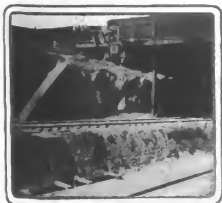
The two largest automobile firms in Saginaw, Mich., Alfred W. Norris and the Valley



**MOTOR AGE** TO SHOW THE ABSURDITY AND LACK OF CONSISTENCY IN THE BRITISH MOTOR CAR LAW, MOTORISTS ILLUSTRATED OF LONDON OBTAINED A LICENSE FOR A BLIND MAN. THIS IS IT.

Auto Co., were consolidated a few days ago, forming a corporation to be known as the Norris Auto Co. The capital stock of the new company is \$12,000 and the incorporators are Arthur D. Eddy, Harry T. Wickes, C. W. Penoyer, Alfred W. Norris, F. G. Palmerton, Geo. B. Morley, C. H. Davis, Clark L. Ring, J. B. Pitcher, A. E. Richardson, William Lemon and M. Passolt. The new concern will occupy the quarters formerly used by the Valley Auto Co., at the corner of Genesee avenue and Tolden street, using the entire three floors of the building, which is 40 by 80 feet. The company has the agency for the Oldsmobile, Knox, Autocar, Packard, Toledo, Peerless, White, Columbia and Waverley, and it will also store and repair gasoline, steam and electric automobiles, gasoline launch engines and bicycles. The charging outfit of the company has a capacity of twelve machines at one time. Saginaw now has about seventy-five automobiles and the company expects to sell about fifty more the coming season.

Marinoni, one of the veteran newspaper men of France, the founder of *Le Petit Journal*, the Paris daily with a circulation of over 2,000,000, is dead. The automobile papers have printed many columns about him, as he was one of the first advocates of the automobile industry, and at a time when almost every paper in France was abusing in every imaginable way the new method of locomotion. Marinoni's chief assistant was Pierre Giffard, who was not kindly disposed toward chauffeurs at that time, 1893. One day Levasseur and Jeantaud called and urged Giffard to accept an article written especially by Levasseur in defense of automobile manufacturers. As was expected, he did not accept the paper and the two makers decided to see Marinoni personally. After a short interview Marinoni called in his chief assistant and ordered him to publish the article the next day in the most prominent part of the paper and to refrain from publishing anything whatever that might hurt the new industry. Both Levasseur and Jeantaud left astounded at the action of the newspaper man, who was then 70 years old and who had seldom reversed a decision of his chief assistant. Marinoni's paper has ever since been a valuable friend for motorists and motor car manufacturers, and has arranged several important competitions.



**MOTOR AGE** NARROW BRIDGE OF PANAMA, CAL. MOTOBISTS—THREE MEN DRIVING A COLUMBIA TOURING CAR CLIMBED OVER THE EDGE OF THE BRIDGE INTO THE RIVER BASKINSET BUT NONE WAS HURT

# AMERICAN MOTOR LEAGUE

## OFFICERS:

ISAAC H. POTTER, President,  
Potter Building, New York.  
CHARLES E. DURYEA, First Vice-Pres.,  
Reading, Pa.  
W. GRANT MURRAY, Second Vice-Pres.,  
Adrian, Mich.  
S. W. MERRIFIELD, Third Vice-Pres.,  
154 Nassau St., New York.  
ROBERT L. STILLSON, Secretary,  
150 Nassau St., New York.  
FREDERICK B. HILL, Treasurer,  
22 Bedford St., Boston.

National Headquarters:  
150 Nassau Street, New York



## CHAIRMEN OF NATIONAL COMMITTEES:

LEGISLATION—George E. Huddell, New York, N. Y.  
ROAD IMPROVEMENT—R. E. Oude, Lansing, Mich.  
LOCAL ORGANIZATION—Charles F. Potter, Denver, Colo.  
TOURING—W. H. Baker, Buffalo, N. Y.  
TECHNICAL—Charles E. Duryea, Reading, Pa.  
MEMBERSHIP—Frank A. Egan, New York, N. Y.  
SIGN BOARD—John B. Price, Hazleton, Pa.  
RACING—A. G. Hartsfelder, New York, N. Y.  
PRESS—Joseph Estabrook, Philadelphia, Pa.  
HOTELS—Francis N. Bain, Newburg, N. Y.

## OFFICIAL BULLETIN

### NEW YORK BOARD OF CONSULS

A good number of New York city members of the league met at the Grand Union Hotel in that city on Thursday evening last and took preliminary steps toward the formation of a board of consuls. A committee was appointed to arrange for a general meeting of New York city members after the show and to prepare and present a plan of organization and an outline for local work. The New York board will co-operate with league members in Boston, New Haven, Providence and Bridgeport on the east, and with the members in Orange, Newark, Elizabeth, Trenton, Philadelphia, Baltimore, Harrisburg and Pittsburgh on the west, with the view of forming a chain of consulates to take up and carry on the work of putting up guide boards and danger signs and otherwise indicating the principal traveled routes between the large cities. From Pittsburgh westward and from Denver eastward the same work will be attempted, and with the growth of the league boards of consuls will be formed throughout all the states for the prosecution of the best objects of the organization.

While on this subject of local organization it is proper to quote very briefly from a letter recently sent to President Potter by Dr. John A. Hawkins, secretary-treasurer of the Pittsburgh board of consuls. Dr. Hawkins says:

"Tell our friends in other cities that they will be surprised to see how anxious the automobilists are for a real good local organization and that a little personal work is sure to be followed by success. We shall be pleased to give them any assistance or information within our power."

There is food for thought in that quotation. Dr. Hawkins may be addressed at 507 Ninth block, Pittsburgh, and will be glad to answer any inquiry.

### NOW FOR CHICAGO

The New York convention adjourned to meet at the Chicago Auditorium on Tuesday, February 9. The league members of the west and "middle west" will then have an opportunity to get together and to become acquainted with one another. Many will attend from the east. Reduced rates have been granted on all roads east of Denver. To make these rates operative at least 100 members must attend the convention. That will be easy, but the following must also be observed:

### CONDITIONS FOR REDUCED FARES

1.—Inform the ticket agent that you are going to Chicago to attend the American Motor

League convention and get from him a certificate properly signed and stamped. If you can not procure a through ticket from your starting point, get a ticket to the nearest point at which a through ticket can be had, and then repurchase to Chicago. Get a certificate from each agent from whom a ticket is bought and present all the certificates to the league officer in charge at the convention.

No reduced rate will be given to any person not holding the proper certificate.

2.—Tickets for Chicago under this arrangement must be purchased not earlier than Friday, February 5, nor later than Wednesday, February 10, 1904.

3.—Tickets for the return journey will be sold by the ticket agents at Chicago at one-third the first class limited fare to those persons only who hold proper certificates, countersigned by the proper officer of the American Motor League certifying that the holder has been in attendance at the meeting and viced by the special agent of the railway association. The special agent will attend at the meeting only on Wednesday and Thursday, February 10 and 11. All certificates must be presented to the agents on one of the dates here mentioned in order to be available in securing the special rate.

4.—Reduced fares are granted only in case the "going"—one way—fare is at least 75 cents.

5.—To prevent delay all certificates should be presented to the ticket agents for return tickets at least 40 minutes before the departure of trains on which return trips are to be made. If this is not done a rush of work at the ticket offices may prevent the issue of reduced rate tickets till a later hour.

6.—Certificates and tickets issued under this arrangement are not transferable.

All members in arrears for dues should send renewal fee—\$2—at once to the secretary and receive membership card for the current year.

All who are not members, but who wish to join the league and attend the adjourned convention at Chicago automobile show week, should send name and address, with one year's dues, \$2, and receive membership ticket. All such persons will be given the benefit of reduced railway fares under the arrangement above described. Address American Motor League, 150 Nassau street, New York, N. Y.

### THE CONVENTION AT NEW YORK

The first general convention of automobilists called in this country was held last week at Madison Square Garden, under the auspices of the American Motor League. And let the fact be ever held in grateful memory that the first day of this congress was set apart as a "good roads day." Thousands of notices and invitations had been sent to automobilists in all parts of the country. Speakers of national repute addressed the meeting and a rousing interest in the work of the league ought to follow.

### LETTERS FROM MEMBERS

Boston.—Your letter and pamphlet received December 15. I thoroughly believe in a national motor league and I know some of the men who hold office in the American league. You asked in your letter if I would co-operate with you in forming a board of consuls. I would gladly do so, for I live in a community where automobiles are in great use, and in fact I am one of the pioneers in the vicinity. I feel that I might have a little influence with automobilists and would encourage membership. Please send me further memorandum as you suggested. Enclosed find check for \$3—\$2 for membership and the remaining one for the Motor Age.—HERST A. BAKER.

Flint, Mich.—Enclosed find membership blank also \$2. As it is the only one you furnished me that in my years of November 28 I would ask that you send me a dozen blanks. We have thirty-one automobiles in our little town of 15,000 inhab. Flint and I can get every owner to join the league in the spring when the fever is again at its highest. W. C. THOMAS.

### THE AMERICAN MOTOR LEAGUE

is an organization to promote the interests of all users of motor vehicles; to ascertain, protect and defend their rights; to oppose and prevent the enactment of unreasonable and oppressive laws; to encourage the use of motor vehicles by agitation and instruction; to provide its members with printed routes, maps and guide books by which touring may be facilitated and encouraged; to promote the work of improving the public roads and the erection of proper guide boards, and other signs necessary to guide and warn the users of motor vehicles; to select and appoint official hotels, repair shops and supply stations where its members may obtain reliable service at reasonable rates.

### WHO MAY BECOME A MEMBER

"Any man or woman, of sane age or over, of good moral character and respectable standing, friendly to the motor vehicle and its interests, shall be eligible to membership."

(Constitution, Article I, Section 1.)

The League is extending its membership to all parts of the country. We invite all friends of the movement to join and aid in building up a powerful organization.

No initiation fee. Annual dues \$2 in advance, or \$3, including 1 year's subscription to Motor Age.



# MOTOR AGE

VOL. V. NO. 5

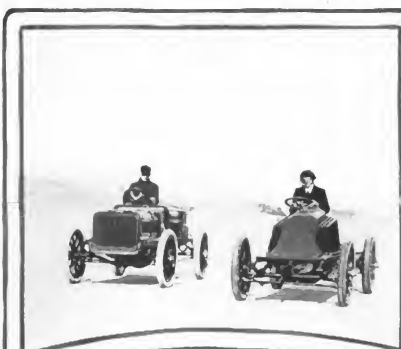
FEBRUARY 4, 1904

\$2.00 Per Year

## THE FLORIDA BEACH TOURNAMENT

Ormond, Fla., Jan. 31--So far as competitive contests went the second annual beach course meet of the Florida East Coast Automobile Association passed into history with the finish of the races yesterday. The formal trials for world's records at the mile and kilometer remain yet to be run. Weather and course permitting they will be begun to-morrow. The aspirants for new world's figures, however, are here to stay and conquer and will await favorable conditions and fight the fight with Father Time as long as hope remains that the old Fythe Boater's colors may be lowered.

The results of the contests and trials already completed mark an epoch not only in automobile racing but automobile building.



future limit of pace possibilities will be the skill and nerve of the drivers only.

Already the long standing record of 46 seconds secured by Augieres on the Dordogne course has been put far behind by not only one but at least a half dozen of the flyers, and even the marvelous 39½ seconds performance for the mile of Henry Ford on the ice of Lake St. Clair has been cut by young Vanderbilt with a 90 horsepower Mercedes of the pattern that is to represent Germany in the coming international cup race. What ever records have been made on tracks or even tested of on roads for all distances beyond the mile and up to 50 miles have been put so far behind as to seem almost laughably slow by comparison with

slow by comparison with



ing. They have demonstrated speed realizations even the most optimistic hardly dared to prophesy so comparatively early in the automobile building art. They have also given grounds for a settled belief that 2 miles a minute will be a speed soon attained and that the

the performances on the Ormond Daytona Beach this week. The meet, however, has had an unsatisfactory outcome in that it has left unsettled the questions of the supremacy between Vanderbilt and his German Mercedes and Oldfield and his American Willys, whether

THEIR VIEW SAID OF THE DE VANDERBILT AND BENARD-MAYOR RACE  
LAST WEEK. VANDERBILT MADE HIS BEACH MILE IN 39 SECONDS



MOTOR AGE

THE RECORD BREAKER AND SOME OF THE OFFICIALS

Vanderbilt can drive his Mercedes a faster mile than 39 seconds, whether Oldfield can pilot his Winton in a record spin as fast or faster than 39 seconds or how much the 43 seconds scored by him in a rolling start and in a race can be bettered by him with a long start and a flying dash for the tape and down the course to the finish.

Mr. Vanderbilt has left for Palm Beach, leaving his 39-second mile as a mark for those that remain here to try to beat it this week. Oldfield's Winton Bullet II is temporarily out of commission through a broken crank shaft.

The world's great miles now are:

39 seconds—Made by W. K. Vanderbilt, Jr., on Ormond beach, Fla., driving a Mercedes and timed by a comparison of watches.

39½ seconds—Made by Henry Ford on the ice on Lake St. Clair, driving the "999" Ford and timed by a comparison of watches.

43 seconds—Made by Barney Oldfield on Ormond beach, driving the Winton Bullet II in a race with a slow rolling start and timed by the Mors electric apparatus.

46 seconds—Record for Europe, made by Angier at Dourdan, France.

The new world's records for longer distances, all made by Vanderbilt and his Mercedes at this meet are:

Five miles—3:31½; 10 miles—6:50; 20 miles—17:02; 30 miles—24:11; 40 miles—33:53; 50 miles—40:49½.

Vanderbilt attained an average rate of 73½ miles an hour in making the 50-mile record and of 87 in scoring the 10-mile record.

All this has demonstrated that the 15-mile course on the Ormond-Daytona beach, Florida, is the greatest automobile speedway in the world, natural or artificial. It is likely to be the mecca for all time for makers, designers and drivers desiring to test the speed of the automobiles they build, design or pilot. A journey across the ocean will be found none too long or expensive for European builders, drivers or owners to test the speed of their motor vehicles on what is now the standard

course of the world, which cannot probably be duplicated by nature or art.

It is to be hoped that American makers will not hereafter be so neglectful of its many advantages as they have in the past and now. There is much to be learned through speed tests on this beach which will do much to help the rapidity of the progress of American automobile building. The annual Ormond tournaments of the future will be classic events of the year and doubtless attract the fastest cars and best drivers in the world.

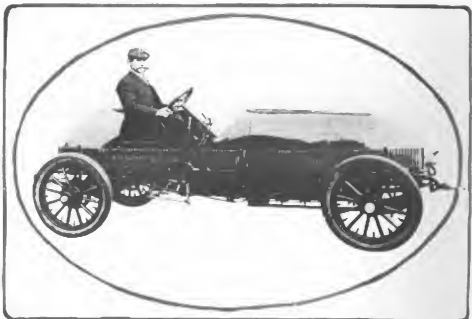
The credit for the discovery of this beach as a speedway and the suggestion of these tournaments belongs to J. F. Hathaway, a Boston automobile enthusiast, who has been a winter resident of Ormond for many seasons. It remained, however, for "Senator" William J. Morgan, of the Automobile Magazine, to put the idea into execution and for the gentlemen of Ormond and Daytona, who have combined

in the Florida East Coast Automobile Association and contributed lavishly in time and money, to help carry it out.

Mr. Morgan, by an unfortunate accident, was kept from much participation in the management during the days of the tournament. The gentlemen of the association, however, worked to the best of their energy and naturally limited experience to make the meet a success. The program was a monster one. The running of the first day of it proved it to have been badly arranged for the economy of time forced by the rising of the ocean tide, which waits for no man, not even an automobile racer or record breaker. The second and third days, however, the experienced race officials of the American Automobile Association, under whose sanction the meet was held, took the active management of all the details, rearranged the program to suit the exigencies of the morning of the timing apparatus, and finished the long program in schedule time, except the running of the record trials, for which deliberation and the awaiting of favorable conditions were necessary.

At the inaugural meet last March but three racing vehicles of prominence participated—the Winton Bullet I, driven by Alexander Winton, the Oldsmobile Pirate piloted by Mr. Thomas and the Indian motor cycle operated by Oscar Hedstrom. All three scored world's records—Winton the 10-mile, Thomas the mile for light cars and Hedstrom the mile for motor cycles. Their speed accomplishments proved the wonders of the beach as a racing path and made the present meet the success it has been, both in participation and attendance.

The absence of many American cars of racing repute at the meet was notable and to be regretted in view particularly of the recent record performances of the Packard Gray Wolf in the middle weight class and the Stevens-Duryea, a light weight racer, on this course. Oldfield and his Winton Bullet II and Joe Tracy and his Peerless international cup flyer were alone prominent on the American side, though the Baker White Mouse is here for the record trials. The leading foreign makers were well represented. The Panhard, Mercedes, Daimler, Daimler, de Dietrich and Mors were all on hand. The three Mercedes—Mr. Vanderbilt's 1904 90-horsepower, and L. H. Rowdon's and S. D. Stevens' two 60-horsepower



MOTOR AGE

JOE TRACY IN THE REBUILT PEERLESS CUP RACER



WATCHING PRACTICE SPINS AT ORMOND

counterparts of the Jematz cup winner—carried off the bulk of the honors in the absence of any racers, of special speed repute according to present high world's record standards.

A 60-horsepower Clement had been expected and Dominick Lamberjack had been sent over to drive it; but a cracked cylinder head encountered in preliminary practice very regrettably prevented its participation in the tournament.

A worn out gear stood in the way of Mr. Stanley's Deuville, which scored a world's track record for 15 miles last season, doing itself justice, and the same may be said of F. A. La Roche's Darracq, a frequent track winner last season, which has been the victim of a series of machinery misfortunes.

The meet was a great success from the attendance standpoint. All the hotels at both Ormond and Daytona were filled, an unusual condition at this season of the year, and proving that the majority of those who attended the meet came to Florida especially for it. The automobile set of the metropolitan "400" was considerably represented and fashion's approval this time will doubtless affect the social side of future tournaments.

Abnormally cold, windy and rainy weather for Florida unfortunately greeted the visitors, but there was one whole day and a morning of sunshine and warmth, which permitted straw hats, white flannels, summer finery and sunbathing, and spread a light coat of tan on tanned faces just to show what the Florida weather clerk can do when he is in a more hospitable humor than he was this time.

The story of the meet would be unjustly incomplete without a grateful mention of the tireless and continuous attention and entertainment Messrs. Anderson & Price, of the Ormond hotel and the Inn, extended their guests, who all went away feeling as though they were personal friends.

#### STORY OF THE FIRST DAY

Ormond, Fla., Jan 28—Oldfield beat Vanderbilt. The first meeting of two of the greatest American and European flyers entered for this straightaway speed tournament on the Florida beach brought victory to the Winton Bullet II, holder of all the world's track records up to 15 miles, to the discomfiture of the new 90-horsepower Mercedes, which scored yesterday the world's straightaway mile record.

So the first regularly scheduled day of the 3-day meet of the Florida East Coast Automobile Association on the now world-famous Ormond-Daytona beach speedway began.

"Barney beat Willie K.—the Winton beat the Mercedes," are the only words one heard reiterated this afternoon and tonight. Vanderbilt's 39 seconds for the mile is mentioned by the general tongue only by way of adding glory by comparison to the achievement of the American driver and the American racing creation.

There is pardonable patriotic rejoicing over

first blood scored by little old U. S. in the first round of this meeting of many of the best drivers and fastest cars two continents can produce.

The critics and the "fans," who have not been carried away on the crest of risky prophecy, are figuring out Oldfield's claims, not only of a second victory and more wins over the game young millionaire driver and sportsman, but of Barney's taking unto himself the straightaway world's record he has long craved to add to his track laurels.

Long before the story of today goes to press for this paper the two champions, barring accidents, will probably have met again, and Barney will have had his go at the straightaway marks set by his rivals. Let the "fans" do the guessing and Motor Age confine itself to a relation of the facts of this great racing function as they occur.

MOTOR AGE has already told in its telegraphic dispatch last night—just before last week's issue went to press—of the early gathering of the racers and their drivers, of the practice spins and the boasts of the time results they netted, of the eagerness of the cracks to be up and at one another and Father Time, and of the world's straightaway mile record scored as brilliantly by W. K. Vanderbilt, Jr., and his Mercedes yesterday.

The history of the meet, however, would be incomplete were the criticisms of the racing board allowing records, when timed by a comparison of watches, instead of by requiring electric timing, disregarded. There are few to express any doubts as to the fact that Henry Ford drove his "999" as fast as 39.25 seconds, and that young "Willie K." piloted his Mercedes in 39 seconds, but there are many to point out the danger and dispute that seems not unlikely to arise in the future if the racing board continues to permit this timing by com-



MOTOR AGE

AROUND NEW CHRISTIE RACES



MOTOR AGE

THE OVERFLOW GARAGE

parison, especially now that straightaway mile record-breaking seems to have settled down to a question, not of whole seconds, but of "fifths."

It is argued that if absolutely the same number of watches and the same method of comparison could be used in every case, instead of leaving the officials at the various trials to their own ideas of the right time in the selection of the watches to be compared, or, as some suggested after the Vanderbilt trial, averaged, the comparison system might be less dangerous.

It is not to be disputed that world's records should be beyond question, without a chance for doubt to enter into them, and be universally accepted the world over. A fifth of a second now means much to American and European rivalry in automobile speed and the attainments of construction. A doubt in accuracy or method will invalidate these records.

Falsus in uno, falsus in omne. One disputed record will destroy confidence in all. There seems to be but one safe, indisputable method that science has so far evolved, and that is by the timing apparatus now in vogue.

Accept, say the prudent, far-seeing ones, the record of Mr. Vanderbilt by way of a starter—it would be unjust and retroactive legislation to deprive him of Henry Ford of their laurels—but right now start afresh and let the lower records likely soon to follow be accepted on a safe timing rule, and so be for the future, like Casar's wife, beyond suspicion of any maker, critic or racing man on either side of the ocean. It fortunately seems likely that before this meet closes Mr. Vanderbilt will have his 39 seconds confirmed, if not bettered, by the new apparatus, and Mr. Oldfield will have a chance to set figures that the new timing rule will not affect.

"Five thirty" and "16 o'clock" were universal on the call card at the hotel desk last night; for the committee had announced the hour of the starting of the first race down at Daytona, 6 miles away, where the day's races were to be run, to be 7:15. Vanderbilt and Oldfield were to meet in that opening mile, and no one would have missed it for a good bit. Accordingly, at daylight the big dining room of the Ormond hotel was filled with eager "fans" and fashionables, too, the latter at home noon-day risers, who breakfast while other poor working Americans are eating their midday meal. The racing craze affected all;

for had not all come here to see the races knowing that down on this beach time and tide wait for no man?

Oranges, fresh from San Lucia grove hard by, hastily swallowed and coffee as quickly gulped, the Ormond crowd started south for Daytona. The lucky cars, who had touring cars here of their own or whose friends had offered



MOTOR AGE

H. L. BOWDEN

them a seat, went down in automobiles, and there was many a merry scrap on the road that morning between cars heavily laden with men and women, eager for a race and ready to cheer at a victory in a spirit or from the mere exhilaration of riding on the smooth sand blown by the waves at the 30-mile-an-hour clip any old car can put up on this course. Carryalls and bicycles were also in the procession.

An hundred others went down the Halifax river by steamboat, and worried the pilot with pleading to hurry up the old tub so as they should not miss the races.

The Ormond race-going crowd was made up of well-to-do automobilists and fashionable folk. Both of these classes came, too, from the hotels and cottages of beautiful tree-embowered Daytona. But in the full three thousand that perched on the sand dunes, lined the rope and sat in vehicles at the start, the native Floridians were distinctively conspicuous in garb and mien. They had come in all sorts of horse and mule driven rigs, some from miles in the interior, to see the automobiles go.

Local speculative fakirs were selling photographs of Vanderbilt and Oldfield.

"Who wants Vanderbilt? Willie K. for 35 cents."

"How much for Burney?" asked a sombrero-topped cracker.

"Fifty for Oldfield. Everybody wants him and there's only a few of him left."

The patriotic cracker paid his half-dollar with a murmur, and proudly carried away a reproduced half-tone of Charles Schmidt driving the Gray Wolf.

Schrier, a New York hustler, well known at all metropolitan race-track meets, was on hand peddling the official programme at a quarter and the card of the day's races at a dime. He was clearing expenses and making a profit.

The starting scene at Daytona, first published in MOTOR AGE in its story of last year's meet, now familiar to all, was again reproduced. There was double the crowd, though. A rope running through posts replaced the makeshift barrier of last year. Rows of board seats had been built. The timer's stand was roped in and elevated. S. M. Butler, the A. C. A. secretary, was running the starting end of the Morse timing apparatus, and Frank X. Mudd, of Chicago, the finish end. A special telephone kept them in communication.

Despite the forethought, the careful preliminaries, and the early arrival of the officials, there was a vexatious delay of 2 hours. It had been arranged that the electricians should get the apparatus down from the 15-mile finish, where it had been in use the day before, and have it on hand ready for adjustment, a matter of 15 minutes or so, when the officials arrived. The local committee, however, had failed to provide transportation facilities for the electricians, and a rig had to be hunted up and a round journey of 10 miles made.

At 9 o'clock the thick moving haze still continued, so that vehicles were visible but a quarter of a mile away. An hour later, while the races were still in progress, the sun was



MOTOR AGE

OLDFIELD WINNING THE MILE CHAMPIONSHIP



getting in its warm work and laying layers of tan on the faces of the northern tenderfeet. There was a peeling of men's coats and a tossing off of women's jackets. Whew! It was hot, but the cloud of mist still hung over the course a quarter of a mile away.

A crowd of forty or fifty officials, newspaper men and wise ones at the finish post, where Frank

Mudd, the timer, had rigged a canvas screen; A. R. Pardington, the referee, stood at the ocean end of the line with a big flag; and a half-dozen were hard by with split watches in hand to time the differences between the finishers.

The race officials had split the entrants for the mile A. A. championship into two heats. W. K. Vanderbilt, Jr., 90-horsepower Mercedes; L. H. Bowden, 40-horsepower Mercedes, and B. M. Shanley, Jr., 40-horsepower Deauville, with E. H. Fredericks as driver, were in the first heat. Barney Oldfield, 100-horsepower Winton Bullet II; S. B. Stevens, 40-horsepower Mercedes, and W. G. Brockaw, 40-horsepower Renault, driven by M. G. Berman, made up the second. The winners and the second man scoring the fastest time were to go in the final.

Down at

the, if any, wind, and the racers had approached the line slowly as compared with the full speed rush of a mile start for a record trial.

The watchers had not long to wait for the "They're off!" cry of the second heat. It came soon. Again the rush to the side, the climb of the dunes, the eager straining of eyes toward the mist bank. The honk-honk lasted a few seconds, and then a good old American cheer of patriotic glee and genuine admiration went up as a long, low maroon colored racer shot from the mist and swept graceful as a sea bird along the sand close to the waves.

"Barney! Barney! Barney! Good old Barney!" was Oldfield's gleeful greeting as he raced across the line an easy winner by six lengths from Stevens and his Mercedes, with Brockaw's Renault the same distance behind the 60-horsepower German. Barney had ridden the mile from the slow rolling start in 43 seconds, the fastest mile ever ridden in a race and the fastest mile ever timed by the Mors machine.

It was Oldfield, Vanderbilt, Stevens for the final. As the two world's record holders approached the tape Oldfield was nearest the water, while Vanderbilt was on the land side. No one watched Stevens. Both approached the line neck and neck.

his way back. He was calm and took his defeat like a sportsman.

"I was not ahead of Oldfield at any time during the race," said he to a Motor Age man. "At the instant I threw on my fourth speed Oldfield seemed to jump right away from me and beat me out as you saw."

There was rejoicing, of course, that the chief American car of repute on hand had made good against the latest product of the builders of the international cup winners and against the other cars of foreign make, which largely predominate in the entries here.

It was not forgotten, though, that Mr. Vanderbilt is an American, too, and as an American driver has brought honor to this country. Mr. Vanderbilt has won many friends here among the newspaper men and automobilists in general by his unassuming demeanor and good fellowship with all. He has seemed to realize that down here he is among those who know the game and are enthusiasts in it like himself and not among silly sensation seekers, nor open to the annoyance of impertinent askers of foolish questions. He has proved to many, who have never known him before—

Lim be—



W. G. BROKAW AND MR. AND MRS. HOWARD GOULD IN BROKAW'S RENAULT

MR. HAPGOOD, MR. MYER, MRS. HATHAWAY AND MRS. HAPGOOD IN BOWDEN'S COLUMBIA

WILLIE K. SUPERINTENDENT THE DISSECTION OF BROKAW'S RENAULT

the finish end news of the start was waited nervously and eagerly for at that end it was not known just how the race had been split up or whether there were to be any heats at all.

"They're off," cried Mudd at the phone. "They're off!" yelled Pardington as he rushed with his flag to his post by the waves.

"They're off!" cried the crowd as it hustled from the raceway and in part scrambled up the sand hills, eager to catch the first sight of the race.

Thirty seconds of silent expectancy and then "honk-honk-honk" from up the mist-veiled beach the only warning the racers gave of their approach. Suddenly there shot from the mist bank the big, gray aluminum bodied Mercedes of Vanderbilt. Another bonneted car flashed into view at his heels an instant later. It was Bowden. Eight or ten lengths farther back came the long Deauville chocolate lozenge. In a jiffy Vanderbilt had crossed the line three lengths ahead of Bowden, who led Fredericks an hundred yards. The time was :48.25.

It must be remembered that there was lit-

speed. Both are master drivers. Each eyed the other so that he might respond to his slightest move. They crossed the tape exactly even; but in a jiffy Barney threw in his fourth speed, and so far as the first hundred yards count had the better of the start. There was a yell of joy from the partisans of the American car. Barney seemed to outfoot Vanderbilt from the start and both disappeared in the mist with Barney plainly in the lead and apparently gaining.

"Oldfield! Oldfield! Oldfield!" yelled the excited partisans at the finish end as Barney raced into view way in the lead of a big gray car that was unmistakably Vanderbilt's.

With Tom Cooper at his side, Oldfield, leaning far forward over his wheel, tore down the stretch like a suburban handicap runaway. As he neared the line he waved his hand in triumph and shot by the flag fully an hundred yards in front of Vanderbilt. Stevens broke a throttle and did not finish.

Oldfield's partisans danced with joy and cheered him wildly as he passed on his return. He did not stop, but went straight on to the starting line. Nor did he stop there, but merely bowed his acknowledgement of the cheers that greeted him and disappeared up the road to Daytona.

Mr. Vanderbilt pulled up a minute or two on

fore, that he is a true sportsman and an all-around good fellow. This tournament has been a great benefit in bringing all the friends of the sport, racing men, writers and other followers close enough together to let every one know what good fellows all the other fellows are.

It has helped to promote that spirit of affiliation of interests which so notably marked the affairs of old bicycling days.

Of course, partisanship runs high tonight between the adherents of Oldfield and Vanderbilt. There is considerable betting over the result of the 50-mile race on Saturday, in which the two are entered. W. H. Peters, a metropolitan bookmaker, who runs a hotel and a fine coquina garage in Daytona in winter, offered to wager a thousand dollars that Oldfield would win. Mr. Vanderbilt and Gould Brockaw divided the bet between them and put the money up.

There was an attempt made to run off the mile invitation race for amateurs. Vanderbilt, Mercedes; Bowden, Mercedes, and Fredericks, Deauville, started in the first heat and finished in this order. It was declared "no heat," through the start having been made without the timing apparatus being in excellent working order.







THE RENAULT IN A WARMING-UP SPIN

James L. Breese, 40-horsepower Mercedes; William Wallace, 30-horsepower de Dietrich, and Proctor Smith, 24-35-horsepower Panhard, rode in the second heat and finished in the order named. The time was 5:18 3-5. Wallace was 5 seconds behind Breese and beat Smith 6 seconds.

Rising tide and a rough beach prevented further racing for the day. Florida weather being on a jamboree this week, a cold north wind in the afternoon made one forget the sunshine and asburn of the morning.

## SECOND DAY RACES

Ormond, Fla., Jan. 29.—A broken crank shaft today put Barney Oldfield and the Winton Bullet II down and out for the day and—worse luck—for the whole tournament. The breaking followed a brilliant win in his heat in the 5 miles free-for-all, which he won in 3:48 4-5 from Frank La Roche, Darraac, practically coasting the whole of the last mile on four of his eight cylinders.

"Up to the four-mile post I don't think I ever went so fast in my life," said Barney. "Just there, though, four of my cylinders flooded and I did little more than let the Bullet run."

"Can't I fix it? I cannot. It will be 6 weeks before the car can be got in running shape again. Bullet III? No, she wouldn't hold the cars here a minute. She's too light for this company."

This evening, at the request of Referee Fardington to assure the public that Oldfield's statements were correct, a committee made up of S. M. Butler, S. A. Miles and A. L. Riker inspected the Bullet in the Peters garage at Daytona, and later on a bulletin announced that the car was unfit for racing and beyond immediate repair.

The accident was a bitter disappointment to Vanderbilt, Oldfield and everybody. It left the

open races a gift for the big Mercedes, and the only element of human interest remaining to the crowd at large was how fast Vanderbilt could drive over the various distances named in the competitions.

An Oldfield-Vanderbilt controversy was started forthwith, which will probably have to remain unsettled until the two meet again in a straightaway run on this beach next winter.

Vanderbilt has made a mile in 39 seconds, world's record time.

Oldfield has beaten Vanderbilt by 3 1-5 seconds in a mile race, scored 43 seconds in his heat against the 48 4-5 made by Vanderbilt in his, and so far as time goes has 43 seconds from a slow rolling start timed by electric apparatus as against 39 seconds made by Vanderbilt in a time trial at full speed from a half mile or more flying start.

Vanderbilt has a record, Oldfield a victory. Figure it out whichever way your prejudices prompt, but after all you will have to wait for next year's meeting of the two on this now historic and grandest speedway in the world to settle the dispute, and even then there is a chance that there may be "batters in" from European and American factories, driven by

new hands to make "has beens" of both of them and force the cry, "The kings are dead! Long live the king!"

The delays resulting in the programme being long behind schedule put it up to the racing officials to get a hustle on or have the tournament a half failure through weary and unnecessary dragging. The local committee had none wonders in the way of attending to preliminaries and securing generous contributions to make the most possible, but the tournament had panned out too big and demanded a management requiring experience the local workers have not had a chance to acquire. Accordingly last night the racing officials took the bull by the horns and told the local committee quietly but firmly and with all due appreciation of what it had done, that they must have exclusive control of the running of the races or they would have to be abandoned.

The experience of the day before had shown that the original arrangement of the programme rendered it impossible to complete it on time. To shift the timing apparatus took up too much time from the previous 4 hours allowed daily by the tide. Accordingly to-day the apparatus was first set for the mile, and all races at this distance run off, and then at 5 miles for the events at that distance.

Fardington, Miles, Riker, Butler, Mudd, Gillette, Picard and Britton were assigned their particular functions and things ran swiftly and favorably to the end that the long programme of heats and finals at a mile and 5 miles was run off before old Father Neptune could butt in and call a halt.

The races started from the Ormond end and finished like clockwork. In fact, their running off was so mechanical as to rob them of much of their interest as contests. It was a case of start, finish, time, and on the mark for the next race.

After all, there is very little to this straight-



WHERE CARS WERE KEPT

away automobile racing beyond seeing the marvelous speed the cars develop and calculating the limit of power possible to be attained by designers and makers. Of course, it is a grand sight to see a sextette of these monster road locomotives start down this grand ocean speedway in a bunch until the bunch disintegrates and gradually stretches out into a madly pursuing string. It doesn't take many races, though, to determine the relative speed merits of the contestants and to figure out with certainty the outcome, barring the accidents, to which automobile flesh is heir. Of course there are questions of supremacy between great cars like Vanderbilt's and Oldfield's that no one race or run over a single distance can determine. Then there are cars of equal power like the two Mercedes of Stevens and Bowden, or the La Roche Darracq and the Shanley Deauville, which furnish in and out running; but these are the exceptions, not the rule.

But who would miss these thrilling speed demonstrations or would fail to see these grand results worked out on this marvelous beach that mean so much to the science of automobile building and the possibilities of the sport?

No one who is here would. No one of you who are not here, if there is any of the warm blood of the new sport of kings in your veins, would, if you could help it.

Already Charles G. Burgoyne, a Daytona resident, has raised by subscription over \$3,000 for the prizes and expenses of next year's meet. W. K. Vanderbilt, Jr., and H. M. Flagler have subscribed \$500 each; Mrs. Howard Gould, C. G. Burgoyne, H. L. Bowden, S. B. Stevens, James L. Reese, Proctor Smith and J. H. Woodley, \$250 each, and Talmadge Hall, \$100.

But back to earth and facts and the races again. It was a case of early rising and the

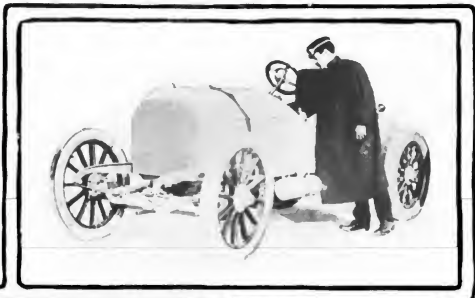
You at home looking at the snowstorm through the window or nestled around the fire can banish your envy of us for this day at least from the thermometrical standpoint. We were not cooling our overheated selves in the ocean, taking on tan on the sand dunes or lying in an orange grove while a negro slave fanned us and peeled luscious fruit for us. We were watching the races on the beach with coat collars turned up, but we were seeing the best sport the automobile has yet produced in the speed line.

Records were being broken—that goes without saying. Nearly every race established new figures. Just forget that any former competitive records were ever made, pick the best figures from the summary of this tournament, and you will come pretty near to having the world's records both competitive and against time. Even the so-called second-raters were

the first heat in 51 4-5 seconds, once Fournier's world's record. S. B. Stevens, 60-horsepower Mercedes, gave W. K. Vanderbilt, Jr.'s 90-horsepower Mercedes a fairly close run of it in the second, scoring 50 1-5 seconds against the young millionaire's 47 3-5 seconds. Proctor Smith, 24-35-horsepower Panhard, beat William Wallace, 30-horsepower de Dietrich, badly in 1:07 1-5, a comparative crawl by a pair of low powered cars. "Mile a minute" has no startling significance on this beach, where 2 miles a minute is predicted next year.

It was easy for H. L. Bowden, 60-horsepower Mercedes, to beat F. A. La Roche, 40-horsepower Darracq, and J. Insley Blair's 24-35-horsepower Panhard, driven by M. W. Ehrlich, in the 1:05 class in 52 2-5 seconds.

The "1:05 second" class resulted in a pretty scrap between H. L. Bowden, 60-horsepower Mercedes; S. B. Stevens, 60-horsepower Mer-



WILLIE K. AND HIS 90 HORSEPOWER MERCEDES

cedes, and W. Gould Brokaw, 40-horsepower Renault. Bowden beat Stevens three lengths in 48 seconds, and Brokaw was but a second behind the winner.

G. H. Curtis, 5-horsepower Hercules, made a new straightway mile record of 59 1-5 seconds in the motor cycle race, though Albert Champion scored 54 seconds on a four-cylinder Clement at the Charles River track, Boston, last season. Oscar Holstrom and W. W. Austin, both driving Indians, were second and third, respectively, in 1:04 and 1:19.

The second heat of the 5-mile amateur invitation race carried over from yesterday went to Vanderbilt in 3:38 1-5, a new world's record, with Stevens but four-fifths of a second behind him, and Bowden third in 3:46 3-5. Vanderbilt still further lowered the record in the final to 3:34 3-5, with Stevens second in 3:41 4-5, and James L. Reese, 40-horsepower Mercedes touring car, beaten off.

How Oldfield beat La Roche many lengths in 3:48 4-5 in the final heat of the 5-mile invitation race has already been told. L. S. Ross, driving a Stanley steamer, was in this heat, but quit before the finish. Vanderbilt won the second heat by 15 1-5 seconds in 3:40 from Bowden, and the final in 3:31 3-5, still another lower world's record, from Bowden, who this time improved his figures by scoring 3:40 4-5.

S. B. Stevens won the 5-mile handicap from scratch in 4:00 2-5. Joe Tracy drove the



W. K. VANDERBILT, JR. NEGLECTS HIS OLD RECORD MORE FOR HIS NEW MERCEDES

some crowd of enthusiastic spectators again—not the 3,000 that were at Daytona yesterday, but the thousand enthusiasts, to whom one demonstration of how fast an automobile can go was insufficient. It was a case—alas!—of cold north wind and winter winters again. The balmy Floridian breezes were nestled away comfortably in some warm corner of the cave of the winds. Straw hats and white flannels were out of fashion, and bathing even in the warm water of the sulphur spring back of the hotel, much less the ocean, were but memories of the early week. It wasn't cold enough to chill the sporting blood, but there was nothing of the good old summer time about the day.

making the performance of Mr. Aguières and his Mors in riding a mile in 46 seconds look slow by their averages in the 5 miles and were coming pretty close to it even in the single miles with slow rolling starts.

The table of the summaries really tells the whole story of the races better than mere description. There was really nothing to describe. The racers started, finished and had each of their times taken and announced.

The mile amateur invitation race was the first on the programme. L. H. Bowden, 60-horsepower Mercedes, simply ran away with Gould Brokaw's 40-horsepower Renault and James L. Reese's 40-horsepower Mercedes in





R. M. SHANLEY, JR., IN HIS LEXINGTON, WHICH WAS DRIVEN BY FREDERICKS

70-horsepower Peerless international cup racer, which was given but 5 seconds, in 4:28, and was second. La Roche, with 35 seconds, was third in 5:05, and M. G. Bernin, driving Insley Blair's 24-35 horse-power Panhard, was fourth in 5:46 1-5.

L. S. Ross, piloting a Stanley steamer, easily won the 5-mile race from Hugh L. Willoughby, 11-horsepower Autocar, in 7:15.

### THIRD DAY RACES

Ormond, Fla., Jan. 30—Bright, cool, clear, aired weather, just the sort of a day to insure perfect carburation and record breaking on an up and down course with not a very strong breeze blowing from the north. The sun tempered the chill of the cold and was strong enough to tan a bit and warm enough to jolly even laymen into sticking to the balconies of the Inn or to the boards of the open stand built against the sand dunes. The number of ladies to watch in the sport was large. There were chatty little parties on all hands. It wasn't too cold for Mrs. Riker, queen of the Mud Larks, to pursue her crocheting on the stand between starts and finishes and entertain a coterie of the craft with automobilizing experiences and with automobile mechanics too. She declares her husband will not come down next year without a new Locomobile racer designed especially for the meet and bewailed his failure to have the little electric skeleton that still holds the mile straightaway record in this class on hand, for it is still in existence.

There were 10, 20 and 50 mile races to be contested. As the longer races were run with a turn a 10-mile stretch sufficed for all and aided in the prompt putting through of a somewhat formidable program. All hope of the mile and kilometer record breaking trials being formally attempted before next week had been long abandoned. The racing begun at 9 o'clock and was over in time for luncheon and in incidental obedience to the rising tide at 1 o'clock.

The first race on the card was the 50-mile open—a cinch for Vanderbilt in the absence

of Oldfield, Barney, by the way, was at the start with the little Bull Pup, but the kid car was outclassed in weight and power by the big fellows on hand and Oldfield did not start with it.

Five cars faced the starter. They were sent away as follows: W. Gould Brokaw's 40-horsepower Renault, driven by M. G. Bernin, at 9:14; J. Insley Blair's 24-35 horse-power Panhard, driven by M. W. Ehrlich, at 9:16; F. A. La Roche, 40-horsepower Darracq, at 9:17; L. H. Bowden, 40-horsepower Mercedes, at 9:18, and W. K. Vanderbilt, Jr., 50-horsepower Mercedes, at 9:19.

The racers had to turn in their tracks down the beach at the 10-mile mark. It was practically a handicap, yet in a little over 15 minutes two little moving specks were seen coming from way down the beach. The head one neared and a half mile away was recognized as Vanderbilt's Mercedes, chased a hundred yards back by Bowden. The two Mercedes had passed the whole field. There was not another

contestant in sight. Vanderbilt rounded the high step ladder, which served as a turning post, 3 seconds ahead of Bowden. It must be remembered that the "60" had had a minute's start on the "90." Vanderbilt's time was 7:25 for the 10 miles and 17:02 for 20 miles, a new world's record. The 7:25 wiped out Alexander Winton's 10:26, made last year with a turn at the 5-mile post. Bowden's time was 18:05. La Roche followed in 22:39, and Blair in 25:09. Brokaw had quit the race.

The times for 30 miles were: Vanderbilt, 24:11; Bowden, 25:29; La Roche, 33:07; Blair, 35:35. All the times but Vanderbilt's are unofficial.

The times for the 40 miles were: Vanderbilt, 33:52; Bowden, 35:26; La Roche, 48:07, and Blair, 49:14—all unofficial but Vanderbilt's.

Vanderbilt won the race in 40:49, with Bowden second in 42:44, and Blair third in 57:08; all official.

All of Vanderbilt's times were world's records. His average was 49 seconds per mile and 73½ miles an hour for the 50 miles.

Vanderbilt scored a new record in the next race—a 10-mile invitation for amateur drivers. He won in 6:50. This is an average of 41 seconds to the mile, or 87.8 miles an hour.

Sterens this time beat Bowden for the place by 4½ seconds in 7:03½. Breese was fourth in 9:20½, with his "40" Mercedes touring car and William Christie, 30-horsepower Christie, fifth, in 9:35.

Oldfield next essayed a 10-mile go with the Winton Bullet III and scored 9:42½. This was slow, but Barney had good naturedly driven into the ocean to please the photographers and gotten salt water in his carburetor. It will be remembered that Oldfield drove this little car 10 miles in 9:01½, at Cleveland, September 4, 1903, which is the world's track record for cars under 1800 pounds. He will put it in shape for Monday's record trials. They say tonight that Oldfield will be back here 6 weeks hence, when the big Bullet is mended, and have a go at all the records.

Of course Vanderbilt won the 10-mile A. A. championship. Bowden beat Sterens for the place. By some mistake the Moss machine was not started and no time was taken. The race stood, however, as run.



COMPARING STOP WATCHES



IN FRONT OF THE ORMOND HOTEL

This was the way they figured out the allotments in the 20-mile handicap: Stevens and Bowden, scratch; Joe Tracy, 70-horsepower Peerless cup racer, 10 seconds; B. M. Shanley, Jr., 40-horsepower Deauville, 1:10; La Roche, 2:30; Christie, 2:50, and Blair's Panhard, driven by M. W. Ehrlich, 2:50. La Roche had trouble the first mile with his clutch and quit. Bowden won in 18:40, with Stevens second in 18:50%. The Deauville was third in 30:26%, and the Peerless fourth in 31:53%. Earlier the transmission of the Deauville showed signs of wear in its clutch. The car Henri Page drove in world's record time for 15 miles at the Empire track has been, therefore, unable to do itself justice.

In this race occurred the only serious accident of the tournament. In rounding the turn M. W. Ehrlich, driver of the Blair Panhard, turned too short and at too reckless speed and was upset. He lay unconscious for some time. He was taken to the Daytona hospital. Some say only a shoulder bone was broken, others that the shock may prove serious to him.

G. H. Curtis, 5-horsepower Hercules, won the 10-mile motor cycle race in 8:54%, a world's straightaway record. W. W. Austin, 1½-horsepower Indian, was second. Oscar Helstrom started with a 1½-horsepower Indian to save his entrance money, but soon quit. His new 5-horsepower racer was out of commission through a broken pin.

Hugh L. Willoughby, 11-horsepower two-passenger Autocar touring car, was given any old start in the 10-mile handicap, which had Bowden and Stevens on scratch and no other contestants. Stevens beat Bowden this time in 7:28% to the Bostonian's 7:38%. When the two big Mercedes flyers were a quarter of a mile away the sassy little Baker electric 2½-horsepower White Mouse, a diminutive replica of the famous Bakr torpedo, silently and unobserved sneaked from the crowd after them. Reynolds, its operator, caught them before they had gone a mile, came up alongside, gave them the laugh and then quit.

Full half of those who had come to see the tournament left this afternoon leaving only the contestants, hide-bound "fans," the newspaper men and the regular Ormond sojourners to stay

over for the record trials on Monday or the first favorable day next week. Vanderbilt also left. Palm beach was his destination. Presumably he will return for another "go" if his straightaway 39-second record be beaten. Lamberjack, also departed. He has been unable to race, owing to the cylinder-head of his 60-horsepower Clement having cracked.

#### MONDAY RECORD TRIALS

Ormond, Fla., Feb. 1.—With the shifting of the brisk wind to the northwest, clear, cool and bright weather put in its appearance for today's record trials. It blew across the course and slightly favored the machines, although some of the drivers held to the opinion that it was rather unfavorable.

The two 60-horsepower Mercedes machines of Bowden and Stevens were unable to even approach Vanderbilt's mile figure of 39 seconds,

being over 4 seconds away; nor did they equal their own former average mile scored in longer races.

Bowden's 60-horsepower Mercedes, driven by his light-weight chauffeur, Charles Basto, did, however, equal Durray's world's record of 26% seconds for the kilometer made with the huge Gobron-Brillio. Ross, with a Stanley steamer, now holds the world's mile record for steamers at 53% seconds, and he also made a new American steam kilometer record of 34% seconds.

The Baker electric machine, the new White Mouse, cut the world's electric mile record to 1:01, lopping 2 seconds off of Riker's record. Mr. Baker is confident he can lower this figure, as he says the batteries were insufficiently charged, and will make another try tomorrow, confident he will get close to the 50 second mark.

The second heat of the 10-mile match between Stevens and Bowden was also run off, Stevens winning by an hundred yards, no time being taken. This was considerable of a surprise, inasmuch as Bowden defeated Stevens in the first heat last Wednesday by 11 seconds. Bowden's car was not in good shape, and Stevens consented to a postponement of the final heat to a future date.

Ehrlich, who was injured by being thrown from Blair's Panhard while making a short turn Saturday, is still in the hospital, suffering from a dislocated shoulder blade, and at times is delirious.

The complete times in the record trials, in the order made, is as follows:

DRIVER	MACHINE	AND POWER	MILE	KILO-METER
Ross	.....	Stanley steamer...	58 2.5	36 2.5
Ross	.....	Stanley steamer...	55 8.5	34 4.5
Ross	.....	Stanley steamer...	55 2.5	34 2.5
Bowden	.....	Mercedes, 60.....	44 4.5	27 3.5
Bowden	.....	Mercedes, 60.....	45 2.5	27 2.5
Bowden	.....	Mercedes, 60.....	44 2.5	27 2.5
East	.....	Mercedes, 60.....	43 2.5	26 2.5
Christie	.....	Christie, 30.....	No time	38 3.5
Christie	.....	Christie, 30.....	1 30 1.5	36 1.5
Christie	.....	Christie, 30.....	1 30	37 3.5
Stevens	.....	Mercedes, 60.....	43 1.5	27
Stevens	.....	Mercedes, 60.....	48 1.5	29 4.5
Stevens	.....	Mercedes, 60.....	44	27 1.5
Breece	.....	Mercedes, 40.....	58	36 2.5
Breece	.....	Mercedes, 40.....	1 03 3.5	37 1.5
Breece	.....	Mercedes, 40.....	1 00 1.5	37 1.5
Tracy	.....	Peerless, 70.....	45 2.5	27 3.5
Reynolds	.....	Baker electric, ½.....	1 01	37 2.5
Reynolds	.....	Baker electric, ½.....	1 00 3.5	38



ONE OF THE MANY 'PEANUT' PARTIES

# RESULTS AT ORMOND-DAYTONA BEACH

## THURSDAY—ONE-MILE A. A. A. CHAMPIONSHIP—FREE-FOR-ALL

FINISH	OWNER	DRIVER	MAKE	H. P.	WT., LBS.	TIME
1.	W. K. Vanderbilt, Jr.	Owner	Mercedes	90	2000	1:48 4/5
2.	H. H. Bowden	Owner	Mercedes	60	2375	1:49 2/5
3.	R. M. Shanley, Jr.	E. H. Fredericks	Deauville	40	1600	1:55 4/5

### SECOND HEAT

1.	Winton M. C. Co.	Oldfield	Winton	—	2140	:43
2.	S. B. Stevens	Owner	Mercedes	60	2375	1:43 2/5
3.	W. Gould Brokaw	Bernin	Renault	30	1600	1:48 3/5

### FINAL HEAT

1.	Oldfield.	Time, :46 3/5.	2.	Vanderbilt.	Time, :49 3/5.	3.	S. B. Stevens.	Broke throttle and quit.
----	-----------	----------------	----	-------------	----------------	----	----------------	--------------------------

## FRIDAY—ONE-MILE AMATEUR INVITATION

### FIRST HEAT

1.	L. H. Bowden	Owner	Mercedes	60	2375	:51 4/5
2.	W. Gould Brokaw	Bernin	Renault	30	1600	
3.	J. L. Breese	Owner	Mercedes	40	2200	

### SECOND HEAT

1.	W. K. Vanderbilt, Jr.	Owner	Mercedes	90	2000	:47 3/5
2.	S. B. Stevens	Owner	Mercedes	60	2375	:50 1/5

### THIRD HEAT

1.	J. Insley Blair	Proctor	Smith	24-35	1750	1:07 1/5
2.	William Wallace	Owner	De Dietrich	30	2460	1:10 3/5

### FINAL HEAT

1.	Vanderbilt.	Time, :48.	2.	Bowden.	Time, :51.	3.	Blair.
----	-------------	------------	----	---------	------------	----	--------

## ONE-MILE 1:05 CLASS

1.	H. L. Bowden	Owner	Mercedes	60	2375	:52 2/5
2.	F. A. La Roche	Owner	Darracq	40	1570	:55 1/5
3.	J. Insley Blair	Proctor	Smith	24-35	1750	1:06 3/5

## ONE-MILE 56-SECOND CLASS

### FIRST HEAT

1.	L. H. Bowden	Owner	Mercedes	60	2375	:48
2.	S. B. Stevens	Owner	Mercedes	60	2375	:48 4/5
3.	W. Gould Brokaw	Bernin	Renault	30	1600	:49

### SECOND HEAT

1.	F. A. La Roche	Owner	Darracq	40	1570	:55 2/5
2.	R. M. Shanley, Jr.	E. H. Fredericks	Deauville	40	1600	:57
3.	William Wallace	Owner	De Dietrich	30	2460	1:23

### FINAL HEAT

1.	Bowden.	Time, :50 4/5.	2.	La Roche.	Time, :54.	3.	Stevens.	Time, :56 3/5.
----	---------	----------------	----	-----------	------------	----	----------	----------------

## ONE-MILE MOTOR CYCLE RACE

1.	G. H. Curtiss	Owner	Hercules	5	160	:59 1/5
2.	Oscar Hedstrom	Owner	Indian	5	98	1:04
3.	W. W. Austin	Owner	Indian	1 1/2	98	1:19

## FIVE-MILE AMATEUR INVITATION

### FIRST HEAT (RUN JAN. 28)

1.	J. L. Breese	Owner	Mercedes	40	2200	5:16 3/5
2.	William Wallace	Owner	De Dietrich	30	2460	

### SECOND HEAT

1.	W. K. Vanderbilt, Jr.	Owner	Mercedes	90	2000	3:38 1/5
2.	S. B. Stevens	Owner	Mercedes	60	2375	3:39
3.	L. H. Bowden	Owner	Mercedes	60	2375	3:46 3/5

### FINAL HEAT

1.	Vanderbilt.	Time, 3:34 3/5.	2.	Stevens.	Time, 3:41 4/5.	3.	Breese.
----	-------------	-----------------	----	----------	-----------------	----	---------

## FIVE-MILE FREE-FOR-ALL

### FIRST HEAT

1.	Winton M. C. Co.	Oldfield	Winton	—	2140	5:48 4/5
2.	F. A. La Roche	Owner	Darracq	40	1570	4:01 2/5
3.	L. S. Ross	Owner	Stanley	6	800	Dropped out.

### SECOND HEAT

1.	W. K. Vanderbilt, Jr.	Owner	Mercedes	90	2000	8:40
2.	H. H. Bowden	Owner	Mercedes	60	2375	8:55 1/5

### FINAL HEAT

1.	Vanderbilt.	Time, 3:31 3/5.	2.	Bowden.	Time, 3:40 4/5.	Oldfield broke crank shaft; did not start.
----	-------------	-----------------	----	---------	-----------------	--

## FIVE MILES FOR TWO PASSENGER RUNABOUT

1.	L. S. Ross	Owner	Stanley	6	800	7:15
2.	H. L. Willoughby	Owner	Autocar	11	1500	8:03 2/5

## FIVE-MILE HANDICAP

1.	S. B. Stevens	Owner	Mercedes	60	Renach	4:00 2/5
2.	L. P. Moers	Joe Tracy	Peewee	5	5 sec.	4:28
3.	F. A. La Roche	Owner	Darracq	40	35 sec.	5:05
4.	J. Insley Blair	Proctor	Smith	24-35	50 sec.	5:46 1/5

## SATURDAY—FIFTY-MILE A. A. A. CHAMPIONSHIP

1.	W. K. Vanderbilt, Jr.	Owner	Mercedes	90	2000	40:40 4/5
2.	H. H. Bowden	Owner	Mercedes	60	2375	42:44 2/5
3.	J. Insley Blair	Proctor	Smith	24-35	1750	37:08
4.	F. A. La Roche	Owner	Darracq	40	1600	Dropped out
5.	W. G. Brokaw	Bernin	Renault	30	1600	Dropped out

## TEN-MILE MOTOR CYCLE RACE

1.	G. H. Curtiss	Owner	Hercules	5	160	8:54 2/5
2.	W. W. Austin	Owner	Indian	1 1/2	98	13:08 2/5
3.	Oscar Hedstrom	Owner	Indian	1 1/2	98	Dropped out

## TEN-MILE INVITATION

1.	W. K. Vanderbilt	Owner	Mercedes	90	2000	0:50
2.	S. B. Stevens	Owner	Mercedes	60	2375	1:05 1/5
3.	H. H. Bowden	Owner	Mercedes	60	2375	1:08
4.	J. L. Breese	Owner	Mercedes	40	2200	0:20 1/5
5.	Walter Christie	Owner	Christie	30	1272	0:25

## TEN-MILE A. A. A. CHAMPIONSHIP

1.	W. K. Vanderbilt	Owner	Mercedes	90	2000	No time
2.	H. H. Bowden	Owner	Mercedes	60	2375	No time
3.	S. B. Stevens	Owner	Mercedes	60	2375	No time

## TEN-MILE HANDICAP

1.	S. B. Stevens	Owner	Mercedes	60	Scratch	7:28 4/5
2.	H. L. Bowden	Owner	Mercedes	60	Scratch	7:28 1/5
3.	H. L. Willoughby	Owner	Autocar	11	2 min.	

## TWENTY-MILE HANDICAP

1.	H. L. Bowden	Owner	Mercedes	60	Scratch	18:40
2.	S. B. Stevens	Owner	Mercedes	60	Scratch	18:50 2/5
3.	R. M. Shanley, Jr.	E. H. Fredericks	Deauville	40	1:10	20:20
4.	L. P. Moers	Joe Tracy	Peewee	70	:10	21:33 1/5

# WORLD'S STRAIGHTAWAY RECORDS

## GASOLINE

DISTANCE	TIME	MADE BY	MACHINE	PLACE	DATE
1 kilometer	26 2-5	Dury	Gebrou-Itelle	Dourdan, France	Nov. 5, 1903
1 mile	26 2-5	W. K. Vanderbilt	Mercedes	Ormond, Fla.	Jan. 27, 1904
10 miles	6:50	W. K. Vanderbilt	Mercedes	Ormond, Fla.	Jan. 30, 1904

## STEAM

DISTANCE	TIME	MADE BY	MACHINE	PLACE	DATE
1 kilometer	27 3-5	L. Hlon	Serpolet	Dourdan, France	Nov. 5, 1903
1 mile	35 2-5	L. Hlon	Stanley	Ormond, Fla.	Feb. 1, 1904

## ELECTRIC

DISTANCE	TIME	MADE BY	MACHINE	PLACE	DATE
1 kilometer	36 1-5	W. C. Baker	Baker	Staten Island, N. Y.	May 31, 1902
1 mile	1:30 3-5	Reynolds	Baker	Ormond, Fla.	Feb. 1, 1904

## VOITURE LEGERE RECORDS

DISTANCE	TIME	MADE BY	MACHINE	PLACE	DATE
1 kilometer	29 2-5	Charles Schmidt	Lackard	Ormond, Fla.	Jan. 3, 1904
1 mile	46 2-5	Charles Schmidt	Lackard	Ormond, Fla.	Jan. 3, 1904

## VOITURETTE RECORDS

DISTANCE	TIME	MADE BY	MACHINE	PLACE	DATE
1 kilometer	33	Villemot	Stevens-Buryea	Dourdan, France	Dec. 31, 1903
1 mile	57 1-5	Otto Nestman	Stevens-Buryea	Ormond, Fla.	Dec. 31, 1903

# TRACK RECORDS

## GASOLINE—Machines over 1,800 pounds

DISTANCE	TIME	MADE BY	MACHINE	PLACE	DATE
1 mile	1:55	Barney Oldfield	Winton	Los Angeles, Cal.	Nov. 20, 1903
2 miles	1:54 1-2	Barney Oldfield	Winton	Denver, Colo.	Oct. 29, 1903
3 miles	2:50 3-4	Barney Oldfield	Winton	Denver, Colo.	Oct. 29, 1903
4 miles	3:47 3-4	Barney Oldfield	Winton	Denver, Colo.	Oct. 29, 1903
5 miles	4:44	Barney Oldfield	Winton	Denver, Colo.	Oct. 29, 1903
6 miles	5:42	Barney Oldfield	Winton	Denver, Colo.	Oct. 29, 1903
7 miles	6:39 1-4	Barney Oldfield	Winton	Denver, Colo.	Oct. 29, 1903
8 miles	7:37 1-4	Barney Oldfield	Winton	Denver, Colo.	Oct. 29, 1903
9 miles	8:34 1-2	Barney Oldfield	Winton	Denver, Colo.	Oct. 29, 1903
10 miles	9:32 1-2	Barney Oldfield	Winton	Denver, Colo.	Oct. 29, 1903
11 miles	10:29 1-4	Barney Oldfield	Winton	Denver, Colo.	Oct. 29, 1903
12 miles	11:27 3-4	Barney Oldfield	Winton	Denver, Colo.	Oct. 29, 1903
13 miles	12:25 3-4	Barney Oldfield	Winton	Denver, Colo.	Oct. 29, 1903
14 miles	13:23 3-4	Barney Oldfield	Winton	Denver, Colo.	Oct. 29, 1903
15 miles	14:21	Barney Oldfield	Winton	Denver, Colo.	Oct. 29, 1903
16 miles	20:24 4-5	Heurt Fournier	Mors	Pt. Erie, Canada	Sept. 26, 1901
17 miles	21:40 4-5	Heurt Fournier	Mors	Pt. Erie, Canada	Sept. 26, 1901
18 miles	22:56 4-5	Heurt Fournier	Mors	Pt. Erie, Canada	Sept. 26, 1901
19 miles	24:12 2-5	Heurt Fournier	Mors	Pt. Erie, Canada	Sept. 26, 1901
20 miles	25:28 2-5	Heurt Fournier	Mors	Pt. Erie, Canada	Sept. 26, 1901
21 miles	26:42	Heurt Fournier	Mors	Pt. Erie, Canada	Sept. 26, 1901
22 miles	27:58	Heurt Fournier	Mors	Pt. Erie, Canada	Sept. 26, 1901
23 miles	29:12	Heurt Fournier	Mors	Pt. Erie, Canada	Sept. 26, 1901
24 miles	30:28 4-5	Heurt Fournier	Mors	Pt. Erie, Canada	Sept. 26, 1901
25 miles	31:44 1-5	Heurt Fournier	Mors	Pt. Erie, Canada	Sept. 26, 1901
50 miles	1:37:50	Alex. Winton	Winton	Chicago, Ill.	Sept. 18, 1900

## GASOLINE—Machines 1,200 to 1,800 pounds

DISTANCE	TIME	MADE BY	MACHINE	PLACE	DATE
1 mile	1:59 4-5	Barney Oldfield	Winton	Cleveland, O.	Sept. 4, 1903
2 miles	1:59 4-5	Barney Oldfield	Winton	Cleveland, O.	Sept. 4, 1903
3 miles	2:59	Barney Oldfield	Winton	Cleveland, O.	Sept. 4, 1903
4 miles	3:58 4-5	Barney Oldfield	Winton	Cleveland, O.	Sept. 4, 1903
5 miles	4:58 4-5	Barney Oldfield	Winton	Cleveland, O.	Sept. 4, 1903
6 miles	5:58 4-5	Barney Oldfield	Winton	Cleveland, O.	Sept. 4, 1903
7 miles	6:59	Barney Oldfield	Winton	Cleveland, O.	Sept. 4, 1903
8 miles	7:59	Barney Oldfield	Winton	Cleveland, O.	Sept. 4, 1903
9 miles	8:59 3-5	Barney Oldfield	Winton	Cleveland, O.	Sept. 4, 1903
10 miles	10:06	Barney Oldfield	Winton	Cleveland, O.	Sept. 4, 1903
11 miles	11:56	James Sincich	Harrac	Detroit, Mich.	Sept. 9, 1903
12 miles	13:59 4-5	James Sincich	Harrac	Detroit, Mich.	Sept. 9, 1903
13 miles	14:00	James Sincich	Harrac	Detroit, Mich.	Sept. 9, 1903
14 miles	15:59 2-5	James Sincich	Harrac	Detroit, Mich.	Sept. 9, 1903
15 miles	17:57 2-5	James Sincich	Harrac	Detroit, Mich.	Sept. 9, 1903

Best mile for this class, 59 1-5 sec., by Oldfield, the third mile in the above.  
 Page's 15 mile time only was taken; Sincich's times from 11 to 14 miles are therefore allowed to stand, although they presumably are slower than Page's.

## GASOLINE—Machines under 1,200 pounds

DISTANCE	TIME	MADE BY	MACHINE	PLACE	DATE
1 mile	1:37 2-5	Dan Wargis	Oldsmobile	Cleveland, O.	Sept. 4, 1903
2 miles	2:24 1-2	Dan Wargis	Oldsmobile	Syracuse, N. Y.	Sept. 12, 1903
3 miles	3:59 4-5	Dan Wargis	Oldsmobile	Syracuse, N. Y.	Sept. 12, 1903
4 miles	4:40 4-5	Dan Wargis	Oldsmobile	Syracuse, N. Y.	Sept. 12, 1903
5 miles	5:40	Dan Wargis	Oldsmobile	Syracuse, N. Y.	Sept. 12, 1903

## STEAM

DISTANCE	TIME	MADE BY	MACHINE	PLACE	DATE
1 mile	1:01	Geo. C. Cannon	Cannon	Providence, R. I.	Sept. 26, 1903
2 miles	2:24 3-5	Geo. C. Cannon	Cannon	Providence, R. I.	Sept. 26, 1903
3 miles	3:58 4-5	Geo. C. Cannon	Cannon	Providence, R. I.	Sept. 26, 1903
4 miles	4:48 2-5	Geo. C. Cannon	Cannon	Providence, R. I.	Sept. 26, 1903
5 miles	5:32 2-5	Geo. C. Cannon	Cannon	Providence, R. I.	Sept. 26, 1903
6 miles	6:22 2-5	J. L. Hedges	White	Cleveland, Ohio	Sept. 5, 1903
7 miles	8:29	J. L. Hedges	White	Cleveland, Ohio	Sept. 5, 1903
8 miles	9:19	J. L. Hedges	White	Cleveland, Ohio	Sept. 5, 1903
9 miles	11:05 1-5	J. L. Hedges	White	Cleveland, Ohio	Sept. 5, 1903
10 miles	12:20 4-5	J. L. Hedges	White	Cleveland, Ohio	Sept. 5, 1903

## ELECTRIC

DISTANCE	TIME	MADE BY	MACHINE	PLACE	DATE
1 mile	1:21 4-5	D. Chisholm	Baker	Cleveland, Ohio	Sept. 4, 1903
2 miles	2:35 3-5	D. Chisholm	Baker	Cleveland, Ohio	Sept. 4, 1903
3 miles	3:52	D. Chisholm	Baker	Cleveland, Ohio	Sept. 4, 1903
4 miles	5:11 1-5	D. Chisholm	Baker	Cleveland, Ohio	Sept. 4, 1903
5 miles	6:29 3-5	D. Chisholm	Baker	Cleveland, Ohio	Sept. 4, 1903
10 miles	17:58	W. C. Baker	Baker	Detroit, Mich.	Oct. 24, 1902

# MOTOR AGE

Published Every Thursday by  
THE TRADE PRESS CO.

1303 MICHIGAN AVENUE CHICAGO  
Telephone Calumet 7017

New York Office, 114 West 43d Street,  
London Office, American Publication Bureau,  
18 Manor Park Rd., Haverley, N. W.

Entered as Second-Class Matter  
October 3, 1905  
Post Office at Chicago, Ill.  
Acceptance for mailing at  
Special Rate of Postage  
Provided for in  
Section 1103, Act of October  
3, 1917

Second-Class  
Postage Paid  
at Chicago, Ill.

Entered as Second-Class Matter  
October 3, 1905  
Post Office at Chicago, Ill.  
Acceptance for mailing at  
Special Rate of Postage  
Provided for in  
Section 1103, Act of October  
3, 1917

Entered at the Chicago Post Office as Second  
Class Mail Matter

Subscription, Two Dollars per Year  
Foreign Subscription, Four Dollars

Any Newsdealer may obtain Motor Age through  
the Western News Co., Chicago, or any of  
its branches, on a returnable basis

## THE NEWEST ADVOCATE

**T**HE years of good roads endeavor have not been wasted. Just now the country is wide awake to the necessity of improved highways, and persons who never before paid any attention to the movement which has been carried on so persistently by a few enthusiasts and their followers, have taken up the cause and are following the flag with determination to carry it to decisive victory over conservatism.

Notable among the recently won friends of the good roads cause is the president of the United States, and a more valuable friend could not be secured.

In another column of *MOTOR AGE* of this issue is quoted the comment of President Roosevelt upon the Brownlow bill, now pending in congress, and which provides for national aid to the extent of the expenditure by the government of \$24,000,000.

Mr. Roosevelt recommends the passage of the bill in no doubtful terms. His reasons why the government should assist communities in the improvement of highways are good, worth reading and remembering, being characteristic of the decisive manner of the man.

This is the time of all times for automobilists to work for good roads. There has never been a period in the history of the country when effort in this direction has been so effective as it is just now, with the Brownlow bill before congress as the object point.

## THEIR PRESUMPTIVE

Electric car.....	130.4 miles per hour
Locomotive.....	120.0 miles per hour
Automobile.....	92.3 miles per hour
Motor cycle.....	69.2 miles per hour
Bicycle.....	62.0 miles per hour
Steam yacht.....	45.0 miles per hour
Running horse.....	37.4 miles per hour
Launch.....	22.7 miles per hour
Skating.....	22.2 miles per hour
Running man.....	14.2 miles per hour
Sailing yacht.....	12.2 miles per hour

In the few short years that have been devoted to the development of the automobile Time has had more hard knocks than he received during any one decade.

His grip upon the animate and inanimate has been firm, and to steal a march on him was seemingly impossible; but his hold is growing feeble.

The automobile is heir presumptive to the speed throne.

From the crudest sort of mechanical mass 10 years ago to the most refined bit of modern engineering has been the development of the automobile—from a possibility to a certainty—from a snail's pace to over 92 miles per hour in point of speed.

In things mechanical one electric car, with its record of 130 miles per hour, and one ponderous locomotive, with 120 miles to its credit, are its only superiors, unless the rifle bullet be considered in this class; in animate objects a few birds have been credited with greater speed than 150 miles per hour; of the elements, lightning only leads the automobile.

It required a charge of 14,000 volts and a monster motor to drive the electric car a mile in 27 seconds, on a perfectly graded steel track, and to ascend at full speed the only grade, which was only  $\frac{1}{2}$  of 1 per cent, would have required 300 horsepower additional for a mile.

The locomotive was a high-powered monster; it made its record, like the electric car, on a perfect track; it consumed tons of coal.

The automobile was driven by a 90-horsepower motor, at a theoretical full consumption of 9 gallons of gasoline for an hour's work, or at a cost of \$1.35.

A single electric car and a single locomotive excel the automobile in point of speed; the ordinary examples of the two types have long since been passed—and there are a score of automobiles which can equal the present record holder's performance.

Considering the losses due to steering and the difference in road bed, the automobile is close upon the heels of the record-holding electric car and the locomotive.

It is but a question of time—days only, in fact—when the newest creation shall lead—when the first shall be last and the last shall be first.

## SIDE DOORS

**S**IDE doors are a disgrace to a big city, but they are a credit to the automobile industry. In connection with a saloon they are suggestive of a form of dissipation which is not wholesome. In connection with an automobile they are eminently the most sensible thing that could be adopted.

They have been written about many times and many speakers at trade and other automobiling dinners have commended them and recommended them. A few makers have adopted them.

The shows of this winter give evidence that they will rapidly become more popular, and it is to be hoped that they will become general.

The side entrance to the tonneau of an automobile presents some difficulties in construction and several disadvantages, but it is beyond dispute that the advantages in the use of the car are so great that they should be considered to outweigh the difficulties and disadvantages.

The automobile must be made convenient and comfortable in every respect, as well as efficient.

The difference in degree of convenience between being able to drive alongside a curb and allow passengers to get into a car or alight from it without stepping into the road, and in being forced to lurch up the car to the walk for the same purpose, is so marked as to be unquestioned.

Makers are devoting much attention and effort to the production of luxurious bodies of all classes. This effort may well extend

to the means of entrance and exit and not be confined to the provision of comfort for the passenger while in the car.

The disadvantages of the side door may be found to be slight, and the difficulties in construction may be overcome. The development of the side entrance is profitable work.

## EVEN IN EGYPT

**A**UTOMOBILING is becoming popular in Egypt and a number of cars are now to be found in Cairo. The road from Cairo to the Pyramids is a favorite route, as the roads of the surrounding country are not so good. The dust is a great nuisance and the motors have to be fitted with dust covers. French cars are in a large majority, but there is a good opening for cars of American make. The Egyptian motor car regulations provide for the registration of cars, and enact that the driver of a car must stop and produce his certificate of registration at the request of a police agent. Every car must carry two plates, one in front and one behind, each bearing the car's registered number and name of the governor at the time it was registered. At night a specially designed lamp with the number on the glass, must be shown behind. Regarding speed, it is held that the driver is responsible for having his vehicle under control, and he must slow or stop in all cases where his car might be the cause of an accident or an impediment to traffic, while speed must be reduced to a walking pace when rounding corners. The speed is 10 miles an hour.

The automobile buying public nowadays so infrequently demands speed that there seems to be little necessity for some of the extravagant claims made by overzealous salesmen at the New York show, and probably reiterated in salesrooms. It is true there are many mile-a-minute machines, but they are not 4-6-horsepower runabouts nor light tonneaus. The buying public nowadays is so wise that the sensible salesman fares best by explaining material things and leaving the purchaser to do the judging.

Europe lost its bicycle records to America: she exported wheels to this country, but was driven out; she held all world's automobile records, but is fast losing them; she exports automobiles to our shores, but—to be continued.

To switch things around: "Some men are born small; some acquire smallness; others have smallness thrust upon them." This applies to only a few trade paper men.

After the Chicago show the peace dove, which lost its plumage fluttering about the N. A. A. M. meeting, may settle down and cultivate the sprouting of pin feathers.

A goodly portion of the automobile world envies Mr. Vanderbilt, not alone because of his millions but because of his ability and nerve in handling an automobile.

Probably the air had something to do with the Ormond mile record; it certainly did with Lamberjack's outburst of doubt of American record times.

"Mercy, des things do go some," remarked an old colored man at Ormond. Shades of Jelinek!

# ALONG THE FRENCH TRIAL RACE COURSE



CONTROL AT VOUGIERES



ZIG-ZAG AT STOSNE

## GORDON BENNETT NOTES

Fritz Opel, who will drive a German racing car in the trial race, is training in a novel way. He waits the passing of the Ostend-Vienna express train, near Raunheim, and starts in pursuit. Opel keeps up the mile-a-minute gait for about 5 miles, until Kelsterbach station is reached. As the road is within a few feet of the rails, and as there is nothing between the two roads preventing each to be seen, the passengers on the train enjoy almost daily the exciting spectacle of Opel's performance.

According to cable advice, the following events will take place in Homburg during the cup week: June 16, weighing of the racing cars at Homburg; June 17, Gordon Bennett cup race—the emperor will probably be present; any during the race; June 18, excursion over the course and banquet given by the German Automobile Club; June 19, track race meeting in Frankfurt-on-the-Main; June 20, elegance competition at Homburg.

The Automobile Club of Frankfurt will have charge of the police regulations along the road where the contest will be held. It is also likely that soldiers will be stationed along the starting and finishing lines in Sauburg.



CLUB HEADQUARTERS AT FLIER



SECTION 447

APPROACHING SOMMERHAUTE

Madam du Gast, the noted Paris woman driver, will take part in the French preliminary trials and drive an 80-horsepower car. Madam du Gast came into prominence as being the only woman competitor in the Paris-Madrid race.

At a dinner given by the Automobile Club of Germany, Dr. Levin-Stoelpling, who is a member of the committee on arrangements for the cup race, said it would be practically impossible for the public to be on the road with the contestants, because besides placing guards along the road, at very short distances, wires will be put up along each side, wherever it is known that people might congregate. It has also been decided that, with very few exceptions, every cross road will be barred by guards and with wire fences. Doctors, nurses and ambulances will be along the road and will have automobiles at their disposal. The Duke of Ratibor urged everybody to work with great care to organize the race so accidents will be practically impossible.

An extra telegraph office will be built near the starting and finishing line and sufficient operators provided so that several thousand messages will be taken care of during the day.



BELLEVEUE CROSS ROAD



SECTION 448

GABRIEL STARTING AT FLIER



# HOW CHICAGO WILL SHINE

## Her People Aroused over the Automobile and, with Hundreds of Western Visitors, Will Pack the Coliseum—An Exhibition of the Trade, for the Trade and by the Trade

Never did conditions a half week ahead of an American automobile show portend so successful an affair as presages the Chicago exhibition next Saturday, February 6. The coliseum, greatest of all American exhibition buildings, has been marked off into an intricate system of spaces which allows the utilization of every available square inch within its four walls; and main hall, annex and gallery are crammed with the exhibits of American automobile and parts and sundry manufacturers.

Glancing back over a period of 4 years and comparing this extreme occupation of every inch of the room in the big, high-arched building with the scattered display which comprised the first automobile exhibition held under roof in Chicago, one is compelled to ponder upon which is the greater progress—that of the automobile industry or that of the Chicago show. Both, of course, have been simultaneous in growth, but the former has not been so graphically presented as the latter, and hence is not so noticeable.

The show of next week in Chicago is the New York exhibition done over, in a different pattern, minus the salon d'automobile, or congregated display of French cars, and plus the exhibition of two score of western machines which did not appear at the Madison Square garden affair. The same compactness of exhibits is in Chicago, although this packing of displays does not cause the same congestion, on account of the more ample proportions of the coliseum main hall.

The building is full, but it is not full by virtue of utilization of nooks and crannies never meant and never suited for exhibition spaces. Every part of the coliseum is open, airy and easily reached. There are no basements graced for the occasion by the dignity of the appellation "exhibition hall," and no rows of "cliff dwellers" posing as occupants of upper tier boxes.

The gallery encircles the main hall and is wide and well lighted. The annex is perhaps the most crowded of the three general divisions of the big building, but is well connected with the main hall and has none of the supplementary appearance of the basement of Madison Square garden.

Altogether the show is well and consistently arranged and presents to the one who surveys it a better impression of the greatness of the American automobile industry than can any other automobile show. In fact, it is more generally characteristic of the American trade than was the New York show. The latter was a place for comparison of the domestic and the foreign product. The Chicago show is a place for the promotion of the American trade. A few foreign cars well established in this market will be exhibited, but the show as a whole is essentially American, even to the point of exhibition of a few western freaks, the result of the studios effort of clever but uninitiated designers to provide the public with high grade automobiles for the price of a good horse and buggy.

This sort of exhibition always marks the Chicago show and many of these novelties in

the way of original or at least radical construction emanate from Chicago—that home of automobile invention if not of automobile production. Some may sneer at the homely devices of these western freaks. They are, if nothing more, a relief from the sameness of the Madison Square garden endeavor to furnish everything a la mode at any old price and with any old degree of excellence.

The hardhood of western inventors in braving the public with cars which would put a French limousine to shame in a competition in departure from the conventional, is praiseworthy. Your small maker goes to the New York show to convince the public that he is a good imitator of the leaders in the trade. The same fellow of the western growth hails the Chicago show as an opportunity to convince the public that he has something that no other fellow has. Thus is the show leavened by the exhibits of freaks.

It is no conjecture to say that this show will present the greatest range of American cars ever brought together. Running through the list of exhibitors demonstrates this, for not only are the delightfully ingenious efforts of the western schemers marked down for display, but the rank and file of the whole trade is on hand, and besides them are still those others of western cars which are neither limousine nor freakish. Then, all of the parts and appurtenances of the American trade from the big pressed steel frames of the Federal Mfg. Co. to the smallest spark plug are thrown in for good measure. The exhibition is a complete representation of the trade.

Commercially the show seems bound to be as remarkable as it is in the character and pretense of its exhibits. Chicago, the natural selling center of the west, has always attracted great numbers of out of town buyers, both dealers and individuals, even its first and smallest show being plainly marked by this attribute.

All of the dealers of the country did not arrange for their lines at the New York show. The great western territory is to be harvested and with the dealers come to buy cars by the dozen, score and hundred, comes a great army of moderately well to do business and professional men from as far as the Dakotas, who would rather spend railroad fare that they may investigate the many automobiles for sale before purchasing than to donate the whole price of the purchase of an unsatisfactory car. They are conservative buyers who wish automobiles for the actual good they will get out of their use. They have no money to waste on experiments. They are scrutinizing enough to learn much by a visit to an automobile show. They feel it to their final financial advantage to add the expense of a trip to the purchase price of a machine if thereby they may satisfy themselves that in buying they are getting exactly the best the market affords for their particular requirements.

They are great people, these laymen from the unfenced west. They take themselves and an automobile show seriously. A MOTOR AGE man recalls a western Illinois doctor, come to

the Chicago show last year, as day after day he studied the cars exhibited. Not a single feature missed his attention, and while he came to the show innocent of any knowledge of the operation of a gasoline motor, he departed therefrom with an intelligent knowledge of automobile construction and a definite reason for having selected the car which he finally purchased.

There are a lot of such men in the west. They come to this show and make it a profitable show. They buy later of the dealers of the west, who come to select the lines of cars to be sold. They are the men who are building the foundation of universal motor transit.

The Chicago show has not the color of the New York show. It is more interesting to the student of business and of human nature because it is far away enough from Broadway to revert more nearly to the first principles of commercial transactions.

Locally the show is sure of a good attendance. The papers have struck a co-operative gait never before known. They have devoted columns and pages to the show and its prospective exhibits. They have awakened to the interest of the general public in automobiling and automobiles, and have sought to furnish the readers with live matter concerning the show. The people of Chicago are thoroughly aroused, and it is not at all unlikely that the 2,000 licensed users of automobiles will increase to double that number during the season. Then, in addition to the new interest of both the papers and the public, is the dearth of other entertainment in Chicago, which will cause the show to be welcomed by that class of persons which feels the needs of going somewhere occasionally.

There is only one theater open in the whole city and this has been open only a few days. For over a month the city of Chicago has stayed home and played clench, for even the saloons are closed after midnight—in earnest this time. The automobile show will attract thousands of these entertainment seekers and, while many of them may come for no other reason than that of curiosity, it is certain that much good missionary work will be done by their attendance and not at all unlikely that the graceful bodies and well executed chassis of the cars will prove sale makers in the case of hundreds who do not contemplate purchasing when first they visit the show.

It is impossible to predict weather in Chicago. Chicago weather is as uncertain as a woman's whims. But Chicago people are so used to it that they seldom carry over umbrellas of their own. If a Chicago man makes up his mind to go anywhere he goes, and if during the month of February a New Yorker meeting him at the automobile show dreads Chicago weather up and down and back and forth, he calmly answers with the argument that there are no finer October days anywhere on earth. He is even likely to excuse the mud on Wabash avenue with the assertion that no other city has enough traffic on its streets to stir up that amount of dirt.

If it is extremely cold and the street cars are peripatetic refrigerators he calls to mind various reminiscences of days when there were no stoves in the cars at all and the floors thereof were packed deep with straw. He may momentarily wrinkle up and remind his New York friend that at least there are no horse cars in town except after 1:30 in the morning. Good weather or bad, the show will be well



attended, and it is safe to presume that the attendance will be a commercially minded one, resulting profitably to the trade.

The only thing that could have possibly mitigated against the success of the Chicago show is the spreading of the report that the city had refused permission for the use of the Coliseum building. As was announced several weeks ago in Motor Age, this matter was quickly and decisively settled and the published statements to the contrary were the misquotations and surmises of papers which wrote to the fact that there had been a temporary closing of the building several weeks after it had been officially inspected and unequivocally opened. These reports may have caused some little harm, but could not have caused much, as their circulation was not wide.

C'est l'exposition extraordinaire!

## RECENT INCORPORATIONS

New York.—Ansonia Motor Car Co., capital, \$10,000; directors, F. C. Armstrong, and T. B. Townley, Elizabeth, N. J., and C. J. Scott, New York.

New York.—Carbon Motor Vehicle Co., capital, \$100,000; directors, C. A. Carbon, Brooklyn; Leopold Sondheim and Eugene Sondheim, New York.

Geneva, N. Y.—Pay & Bowen Engine Co., capital \$40,000; to manufacture engines and motors. Incorporators, W. L. Pay, E. S. Bowen and E. J. Cook.

Indianapolis, Ind.—North Side Auto Co., capital \$15,000. Directors, S. E. Raub, F. M. Rochman, Henry Severin, Harry Murphy, Charles Krauss, W. S. Wynn, Robert Koller, Dr. E. D. Clark and Dr. L. H. Dunning.

Chicago.—Greer Motor Car Co., capital \$2,500. Incorporators, Robert Greer, J. H. Greer, Fred Greer.

Minneapolis, Minn.—Strong Automobile Mfg. Co., capital \$25,000. Incorporators, A. W. Strong, Lucian Swift and J. W. Falconer.

Rochester, N. Y.—Auto-Bike Messenger & Delivery Co., capital \$10,000, to deliver parcels, etc. Incorporators, Charles E. Percy, G. T. Pries and Frederick A. De Vail.

Indianapolis, Ind.—The Gibson-Short Cycle & Automobile Co., capital \$10,000. Directors, William H. Brown, E. E. Short, Cecil E. Gibson, E. M. Gibson.

Pittsburg, Pa.—Pittsburg Auto-Electric Co., capital stock \$6,000. Incorporators, R. S. Donaldson, E. W. McCormick, James F. Shepperd.

## BRITISH RULES MADE

The Automobile Club of Great Britain and Ireland has issued rules and conditions for the British international cup race. These provide that there shall not be more than three boats representing each country; that each boat shall be constructed entirely in the country it represents; that no limitation shall be placed on the number, form, description or power of the engines used; that the boat shall not exceed 40 feet in length over all; that the minimum speed to qualify for the final shall be not less than 12 knots an hour; and that the length of the course shall not be less than 6 or more than 12 nautical miles.

The sales force of the Chicago branch of the Electric Vehicle Co. has been increased by the addition of W. R. Mason, who has been in the electrical machinery business for a number of years.

## EXHIBITORS AT CHICAGO



### AUTOMOBILES

American Darracq Automobile Co., New York.  
Apperson Bros. Automobile Co., Kokomo, Ind.  
Auburn Automobile Co., Auburn, Ind.  
Austin Automobile Co., Grand Rapids, Mich.  
Auto Car Co., New York.  
Bartholomew Co., Peoria, Ill.  
Bartt Mfg. Co., Kalamazoo, Mich.  
Cadillac Automobile Co., Detroit, Mich.  
Chelsea Automobile Co., Chelsea, Mich.  
Chicago Motorcycle Co., Chicago.  
Chicago Motor Vehicle Co., Chicago.  
Crest Mfg. Co., Cambridge, Mass.  
Columbus Motor Vehicle Co., Columbus, O.  
Dawson, J. H., Machinery Co., Chicago.  
Duryea Power Co., Reading, Pa.  
Eisenhuth Horseless Vehicle Co., Middletown, Conn.  
Electric Vehicle Co., Hartford, Conn.  
Elmore Mfg. Co., Clyde, O.  
Ford Motor Co., Detroit, Mich.  
Fredonia Mfg. Co., Youngstown, O.  
Franklin, H. H., Mfg. Co., Syracuse, N. Y.  
Haynes-Apperson Co., Kokomo, Ind.  
Hagaman & Hammerly, Chicago.  
Hammerson Automobile Carriage Co., Detroit, Mich.  
Holston Motor Patents Co., Grand Rapids, Mich.  
Holley Motor Co., Bradford, Pa.  
Jones-Corbin Automobile Co., Philadelphia, Pa.  
Jeffery, Thos. B. & Co., Kenosha, Wis.  
Knot Automobile Co., Springfield, Mass.  
Kist Mfg. Co., Toledo, O.  
Locomobile Co. of America, Bridgeport, Conn.  
Marble-Swift Automobile Co., Chicago.  
Marr Auto Car Co., Detroit, Mich.  
Mead Cycle Co., Chicago.  
Mitchell Motor Works, Racine, Wis.  
Model Gas Engine Co., Auburn, Ind.  
Northern Mfg. Co., Detroit, Mich.  
National Motor Vehicle Co., Indianapolis, Ind.  
Northwestern Furniture Co., Milwaukee, Wis.  
Oida Motor Works, Detroit, Mich.  
Pierce, Geo. N., Co., Buffalo, N. Y.  
Packard Motor Car Co., Detroit, Mich.  
Peckham Motor Car Co., Cleveland, O.  
Pope Motor Car Co., New York.  
Premier Motor Mfg. Co., Indianapolis, Ind.  
Regan Automobile Co., Rochester, N. Y.  
Royal Motor Car Co., Cleveland, O.  
Rothchild & Co., Chicago.  
Rodgers & Co., Columbus, O.  
Standard Wheel Co., Terre Haute, Ind.  
St. Louis Motor Carriage Co., St. Louis, Mo.  
Studebaker Bros. Mfg. Co., South Bend, Ind.  
Stearns, F. B., Co., Cleveland, O.  
Sundusky Automobile Co., Sandusky.  
Sintz Gas Engine Co., Detroit, Mich.  
Stevens, J., Arms & Tool Co., Chicopee Falls, Mass.  
Sullivan, Roger J. & Co., Detroit, Mich.  
Sylvanestry Vehicle Co., Pittsburgh, Pa.  
Temple, Ralph & Austrian Co., Chicago.  
Tinscher, T. L., Chicago.  
Union Automobile Co., Union City, Ind.  
Winton Motor Carriage Co., Cleveland, O.  
Woodie Motor Vehicle Co., Chicago.  
White Sewing Machine Co., Cleveland, O.  
Waltham Mfg. Co., Waltham, Mass.  
Waterloo Gas Engine Co., Waterloo, Ia.

ACCESSORIES

American Ball Bearing Co., Cleveland, O.  
American Coil Co., West Somerville, Mass.  
American Roller Bearing Co., Boston.  
American Electric Novelty Co., Chicago.  
Aurora Automatic Machinery Co., Aurora, Ill.  
Autocar Equipment Co., Chicago.  
Badger Brass Mfg. Co., Kenosha, Wis.  
Baldwin Chain & Mfg. Co., Worcester, Mass.  
Bartholomew Co., Chicago.  
Berkshire Chas. H., St. Louis, Mo.  
Berk Tire Co., Chicago.  
Bower, S. F. & Co., Fort Wayne, Ind.  
Bradenburg Bros. & Alliger, Chicago.  
Brennan Motor Co., Syracuse, N. Y.

Briscoe Mfg. Co., Detroit, Mich.  
Brown-Light Gear Co., Syracuse, N. Y.  
Byrne, Kingston & Co., Kokomo, Ind.  
Chicago Rawhide Co., Chicago.  
Cleveland-Canton Spring Co., Canton, O.  
Columbus Brass Co., Columbus, O.  
Continental Caoutchouc Co., New York.  
Cullman Wheel Co., Chicago.  
Dasey, P. J. Co., Chicago.  
Dasey, P. J., Milwaukee, Wis.  
Demmerie & Co., New York.  
Detroit Motor Works, Detroit, Mich.  
Dayton Electrical Mfg. Co., Dayton, O.  
Diamond Rubber Co., Akron, O.  
Dietz, R. E. & Co., New York.  
Dyke, A. L., Automobile Supply Co., St. Louis, Mo.  
Electric Contract Co., New York.  
Fawkes Rubber Co., Chicago.  
Federal Mfg. Co., Cleveland, O.  
Firestone Tire & Rubber Co., Chicago.  
Flak Rubber Co., Chicopee Falls, Mass.  
Flint Upholstering Co., Flint, Mich.  
Funks, A. H., New York.  
Goodrich, B. F. Co., Akron, O.  
Gray & Davis, Amesbury, Mass.  
G & J Tire Co., Indianapolis, Ind.  
Goodyear Tire & Rubber Co., Akron, O.  
Hartford Rubber Works Co., Hartford, Conn.  
Hendee Mfg. Co., Springfield, Mass.  
Hine-Watt Mfg. Co., Chicago.  
Hiram Drop Purging Co., Cleveland, O.  
Hoyt Roller Bearing Co., Harrison, N. J.  
India Rubber Co., New Brunswick, N. J.  
Kestner, Chas., Mfg. Co., Chicago.  
Long Mfg. Co., Chicago.  
Manhattan Storage Co., New York.  
Milday Mfg. Co., Columbus, O.  
Miller-Knoblock Electric Mfg. Co., South Bend, Ind.  
Morgan & Wright, Chicago.  
Mottalinger Device Mfg. Co., Pendleton, Ind.  
Motor Car Supply Co., Chicago.  
McCord & Co., Chicago.  
Moore, Frank L., Whiting Foundry Equipment Co., Harvey, Ill.  
National Carbon Co., Cleveland, O.  
National Sewing Machine Co., Beidridge, Ill.  
Northwestern Storage Battery Co., Chicago.  
Peterson & Draper, Chicago.  
Pontiac Body Co., Pontiac, Mich.  
Pope Mfg. Co., New York.  
Remy Electric Co., Anderson, Ind.  
Rockaway Auto Co., Rockaway, N. J.  
Rose Mfg. Co., Philadelphia, Pa.  
Richmond Mfg. Co., Richmond, Ind.  
Spilford, C. F., New York.  
Shelby Steel Tube Co., Pittsburg, Pa.  
Steel Ball Co., Chicago.  
Standard Carriage Lamp Co., Chicago.  
Standard Oil Co., Chicago.  
Timken Roller Bearing Co., Canton, O.  
Tennant Auto Tire Co., Springfield, O.  
20th Century Mfg. Co., New York.  
Voeder Mfg. Co., Hartford, Conn.  
Varley Duplex Magnet Co., Providence, R. I.  
Warner Gear Co., Muncie, Ind.  
Whalebone Rubber Co., New York.  
Western Motor Co., Logansport, Ind.  
Wagner Cycle Co., St. Paul, Minn.

## MOTOR FIRE ENGINE

The fire department of Paris recently added an electric engine to its equipment. It weighs nearly 6,600 pounds and runs about 14 miles per hour. The power is produced from forty-eight accumulators, located under the body of the engine, which have a capacity of 100 amperes hours, and a voltage of 110. The engine carries 880 pounds of water in a special tank, and it is possible to use this. It takes 15 seconds, after an alarm has been received at the station, to start the engine, while with steam it required 60 seconds. The old hook and ladder and hose wagons have been transformed into electric wagons.

The Michigan Automobile Co., of Kalamazoo, Mich., devotes a special catalogue to its Model A, which is its 1904 machine.

George Boulding, of Wells, Nv., has secured a patent on a device which distributes the driving power to the four wheels of an automobile.

# RESTRICT OHIO MOTORISTS

## Buckeye Legislature Has a Number of Automobile Bills Before It—Rural Members Try To Rush One-Sided Affair Through—Representative Chisholm's New Measure

Cleveland, O., Feb. 1.—Ohio automobilists are greatly interested in the doings of the state legislature now in session at Columbus, since it is altogether probable that important legislation restricting or at least regulating the use of automobiles will be enacted. Already a number of so-called automobile bills have been introduced, the majority emanating from the fertile brains of backwoods statesmen who desire to please farmer constituents by hampering the rights and privileges of the peppy city fellows whose automobiles have at times disturbed the equanimity of patient Dobbins.

One of the most obnoxious of the bills before the house was proposed by Representative Bassett, from Lucas county, and but for the strenuous efforts of Representative Chisholm, of Cleveland, it would doubtless have been rail roaded through and become a law last week.

The new champion of automobile rights is Henry Chisholm, part owner in the Chisholm & Phillips Automobile, which will shortly open a fine garage in the east end. Mr. Chisholm is an enthusiast, and as he is recognized as one of the able men in the house there is little doubt that he will leave no stone unturned to defeat the aims of the element that is opposing the rights of automobilists. The Bassett bill provides among other things that automobilists on country roads must not only stop at the signal of the driver of a horse vehicle, but also that the automobile engine must be stopped. The bill had been referred to the turnpike committee, and last week the chairman of that committee reported it back to the house with the recommendation that it pass.

In a burst of eloquence that centered upon him the attention of the entire house, Mr. Chisholm declared that the members of the turnpike committee were trying to rush the bill through without giving automobilists a hearing as to their wishes. He declared that he had urged the members of the committee to give the matter a fair hearing and to take time so that similar bills in other states could be examined, but that the committee had refused to listen to him. While explaining how he had tried to save the committee delay, Mr. Chisholm said he had even told the democratic members that he was willing to refer the bill to their "peerless leader, Tom L. Johnson." A democratic committeeman resented this fling and remarked that the Cleveland mayor was a poor judge of the rights of automobilists; that Tom Johnson and his "red devil" had caused more havoc throughout the state than any half-dozen automobilists.

As result of Mr. Chisholm's arguments, the house voted to refer the Bassett bill back to the committee for further consideration, and the committee decided to give the automobilists and farmers a public hearing at an early date. Not satisfied with blocking the bill, Mr. Chisholm started to draw up a substitute bill, which he will endeavor to pass in place of the Bassett bill. Last Saturday Mr. Chisholm made a flying trip to Cleveland and held a conference in the rooms of the Cleveland Automobile Club with a number of the leading automobilists of the city. The terms of Mr.

Chisholm's bill were taken up in detail and the various provisions thoroughly explained. The bill as a whole met with the approval of the Cleveland automobilists and but few exceptions were taken to the provisions. In parts the penalties were considered stronger than were necessary, but the opinion was ventured that the bill is as good as can possibly be drawn up.

The bill is patterned somewhat after the draft of a bill pending in the New York legislature. It provides for the registration of all motor vehicles with the secretary of state at a fee of \$2, which is to cover the cost of seals of registration two inches in diameter and numbers at least 3 inches high, and the strokes not less than half an inch wide, the numbers to be either white or black, whichever would be the most conspicuous according to the color of the automobile. Speed limits are to be 20 miles an hour through the country, 15 miles an hour through villages and 10 miles an hour in the business sections of cities.

Mr. Chisholm was opposed at first to the proposition that automobiles should be compelled to come to a full stop on signal, but there appears to be such a demand for that stipulation that he is willing to incorporate it into the bill and let the house or senate settle the question. He is, however, unalterably opposed to any provision that will require the motorist to shut down the engine. The penalties for violation in Mr. Chisholm's bill vary from \$25 to \$50 fine, the former being for failure to display signal lights visible from all, and other minor provisions, and the heavier fine for failure to register or for excessive speed.

Representative Lehman, of Sandusky, has introduced still another automobile bill. By it automobile drivers must stop at signal from drivers; carry white lights in front and red lights in the rear at night; cities may limit the speed to 8 miles an hour in city centers and 15 in the suburbs and require automobiles to slow down to 10 miles an hour in passing schools and churches. The penalty is from \$5 to \$100.

In the senate the law makers are considering a bill introduced by Senator Ostrutsky, of Delaware, which is calculated to put an end to all automobile racing, either road or track. It limits the speed on the public highways at between 15 and 20 miles an hour in the country and not more than 8 to 10 in the city, and it provides that anywhere shall the speed exceed 30 miles an hour; this includes race tracks. Bad day for Barney Oldfield's business if the Delaware man has his way!

Governor Myron T. Herrick, an ardent automobilist, is very much interested in the several automobile measures pending, and while he has been quoted as declaring that he will not lend his influence either for or against any of the bills, he has stated that it is his desire that a bill fair to both automobilists and farmers shall come from the present legislature and become a law. In speaking of the proposed Bassett bill, he thought that the provision relative to the stopping the engine of

an automobile was too drastic and that it would work hardship upon automobilists. The present law in New York has this provision and the governor is familiar with its workings in that state. He called attention to the fact that in New York some of the drivers on country roads tantalize automobilists who stop on signal by passing the automobile at a small's pace, or by stopping their horses and keeping the motorist waiting for some time.

### AUTO BUSES IN OPPOSITION

San Francisco, Cal., Jan. 28.—Opposition is being made by the Oakland Transit Co. between Oakland and Elmhurst, in an effort to force the corporation to reduce the car fare from 10 to 5 cents. Automobile buses, carrying from twenty to thirty persons, have been placed in operation by Egbert & Stone to compete for the passenger traffic between the two places, the fare being 5 cents. The objection made by the residents and property owners in the vicinity of Elmhurst to the higher fare is that it keeps the district from being populated.

The Mountain View Machine & Automobile Works is building an automobile for Mr. C. O. Gates. The motor has 10-horsepower and there is a set of four gears, which may be shifted to control the speed from 5 to 27 miles an hour. This arrangement is the invention of Mr. Potberg, the manager of the plant, and a patent has been applied for. The machine weighs about a ton and has a tonneau.

Fred A. Jacobs has sold his interest in the National Automobile Co. and has secured the agency in northern California for the Rambler. He has leased the store room formerly occupied by Thomas H. B. Varney at Tenth and Market streets. He will be in his new quarters by the middle of February.

### A. M. L. BANQUET FRIDAY

Friday, February 12, there will be held in the banquet hall in the annex of the Chicago ediseum, a national banquet of the American Motor League. During the show the league will hustle continually to add into its membership, and this banquet is intended to round out the campaign by furnishing the means of getting a large number of members together to stimulate interest and create new enthusiasm. The banquet will be held at 10 o'clock in the evening, and will be a carefully arranged affair. Several locally prominent speakers, as well as several well known automobilists will occupy the speaker's table, and President Potter will be on hand to father the occasion. The Chicago members of the league are working hard to make the dinner a success for the increase of the membership at the show, not only of benefit to the league as a whole, but will assist in making the western end of it strong in itself. It is the intention to increase the Chicago and Illinois membership as rapidly as possible that a local convulsion may be formed upon a substantial basis.

### THE FRENCH LICENSING SCHEME

According to the law of March 10, 1899, nobody is permitted to drive an automobile in France without having received a certificate of ability from the prefect of the department in which he resides. This certificate is issued upon a favorable report from the service des mines, which body subjects the applicant to a practical, as well as an oral examination.

Owing to the rapid increase in the number of automobilists, the service des mines could not adequately handle the work of examining candidates. To remedy this certain automobile clubs will be allowed to issue certificates of ability which will be recognized by the prefect.

The representatives of the club which will be permitted to issue certificates must be approved by the service des mines and the club will be held responsible. These representatives must give a written declaration concerning the aptitude and experience of drivers.

The chief engineers of the service may have an applicant pass an extra examination before them after he has been examined by the representatives of a club. The examination applies to foreigners as well as to Frenchmen, with the difference that if a foreign driver has not been examined by the representative of a French club, but is recommended upon the statements of the foreign club, it will be necessary that a special request be made to the minister personally.

#### LICENSING BILL HAS OPPOSITION

Washington, D. C., Jan. 30.—The house committee on the merchant marine and fisheries will grant a hearing February 4 to those who wish to appear for and against Representative Grosvenor's bill to amend the act of January 18, 1897, relating to vessels propelled by gas, fluid, naphtha, or electric motors. Under the terms of the pending bill "all vessels carrying freight or passengers for hire, propelled by gas, fluid, naphtha, or electric motors," shall be, and are hereby made subject to all the provisions of section 4426 of the revised statutes of the United States relating to the inspection of hulls and boilers and requiring engineers and pilots; and all vessels so propelled, without regard to tonnage or use, shall be subject to the provisions of section 4412 of the revised statutes relating to the regulation of steam vessels in passing each other, and to so much of sections 4433 and 4234 of the revised statutes relating to lights, fog signals, steering, and sailing rules as the board of supervising inspectors shall by their regulations deem applicable and practicable for their safe navigation." Some opposition to Mr. Grosvenor's bill has manifested itself recently.

Owners of small power boats will be interested in the following circular, which has been sent out by the department of commerce and labor through Commissioner of Navigation Chamberlain: "You are informed that trading gasoline vessels must be licensed if measuring over 5 tons and must be inspected under certain circumstances, which will be made known to you on application to the local inspectors. The bureau suggests that you communicate with the chief customs officer of the district in which you reside."

#### ALCOHOL MOTOR SHOW

The French concerns which will exhibit at the Vienna automobile and alcohol show, which opens April 15, are: Mors, Panhard & Levassor, Renault, Charron, Girardot & Voigt, Gardner-Serpollet, de Dion-Bouton, de Dietrich, Gobron-Brielle, Tuto Huber, Brouhot, Durancq, Krieger, Caboché, Depressoir, Chauveau, Hilbig and Lalifol. It has been said that if the Vienna show had been postponed to October or November, most of the exhibitors would have taken part in the St. Louis fair.

## NATIONAL AID ASSURED

### Good Roads Favored by President, Secretary Wilson, Senator Latimer, Congressman Brownlow

Washington, D. C., Jan. 29.—This has been good roads week in Washington, and the movement for the improvement of the national highways, a question of the highest importance to automobilists, has received a boost that will eventually land it among the realities. The good roads committee, representing the national good roads convention, held at St. Louis last April, held a number of sessions this week, and appeared before the congressional committees to urge national aid in the improvement of the roads throughout the country. The sessions of the goods roads committee were replete with suggestions for the improvement of the roads.

Senator Latimer, of South Carolina, and Representative Brownlow, of Tennessee, who are the authors of the two bills now pending in congress to appropriate the sum of \$24,000,000 for the improvement of the highways, addressed the delegates, and each urged them not to favor any special bill, but to stand solid for government aid to the good roads movement, and to strive for a law whereby the government would defray at least a third, if not half, of the total cost of betterment of the public highways.

Secretary of Agriculture Wilson also made a brief address, in which he told what his department had done in the way of gathering and disseminating information as to road building. He said the time had come when congress should enact laws for the betterment of the highways and he promised that his department would execute energetically and efficiently any law on the subject that congress passed.

Among those who appeared before the senate committee was Winthrop B. Searitt, president of the Automobile Club of America. "We have the biggest rivers, the biggest mountains, the biggest trusts, and the poorest roads of any nation on earth," said Mr. Searitt. Among other things he said: "National aid has been given to railroads in the past, and is now given to river and harbor improvements. The improvement of the rivers and harbors benefits directly the cities and indirectly the farmers. National aid in good road building would benefit the farmers directly." Mr. Searitt continued in this strain for some time, and the fact that he, an automobile man, should be arguing for the farmers of the country and saying nothing for the automobilists seemed to interest Senator Dolliver, of Iowa.

"Isn't there a feeling in the west," he said, "that this is a movement on behalf of the automobile?"

The good roads delegates responded "No" with one voice.

The congressional committees acceded to every one who wished it the opportunity to speak of the good roads question, and fully twenty-five persons availed themselves of the opportunity of saying something in behalf of the movement. The delegates were also allowed the privilege of filing written briefs and arguments in support of the movement for national aid.

The delegates to the good roads meeting were presented to President Roosevelt, who greeted

them as follows: "I am sure I need not say how entirely I sympathize with the movement you are championing for better means of communication. The road is the symbol of civilization. Throughout our country the citizens will have to turn their energies in improving the means of intercourse—that is, the roads—between community and community, because we are civilized people and we cannot afford to have barbaric methods of communication."

#### NEW CATALOGUES

A new folder of the E. R. Thomas Motor Co., of Buffalo, N. Y., gives a concise description of the new three-cylinder car, with illustration of some of the vital working parts.

The Winton, Santos-Dumont, Covert, Courier, Knox, Orient, Fredonia, Duryea, Elmox, Stearns, Crest and Autocar are named as users of the guards made by the American Weaver Co., of New Orange, N. J.

"Diamond—5½ miles per mile," is the title of the new booklet of the Diamond Rubber Co., of Akron, O., which retells the endurance run with illustrations, and pictures the store fronts of the branches.

The new catalogue issued by the Cadillac Automobile Co., of Detroit, Mich., illustrates and describes each model of car made, detailing also the engine, gear, chassis and other parts.

Morgan & Wright, of Chicago, enter the automobile game this year and entitle their catalogue "A Tire Triumph." It shows M. & W. simplicity and taste.

The new catalogue of the Turner Brass Works, of Chicago, illustrates carburetors, mufflers, plugs and foot treadles.

"Get There and Back" is the greeting the Prescott Automobile Mfg. Co., of New York, extends in its 1904 catalogue, the inference being that steam is the most reliable power.

The 1904 catalogue of Otto Kenigslow, of Cleveland, O., is small, but concise, telling the story of his wares by a few words and illustrations.

The new catalogue of the Haynes-Apperson Co., of Kokomo, Ind., really contains interesting history, as well as the record of the company's cars since their introduction. It is a plain presentation of the case wherein this company claims to be the oldest maker of motor cars in America, and one of the oldest in the world.

In its most recent booklet the Shelby Steel Tube Co., of Pittsburg, Pa., tells of the many ways in which seamless steel tubing is applicable in many industries. It is well written, well pictured and well printed.

The advance circular describing briefly the 1904 improvements in the Orient backboard, manufactured by the Waltham Mfg. Co., of Waltham, Mass., has been supplemented by a full fledged catalogue containing a complete description of the little car and many pictures of it in use.

Instead of a catalogue a twelve-page folder with artistic covers by the three-color half-tone process is used by the George N. Pierce Co., of Buffalo, N. Y., to announce its new Pierce and Arrow cars.

If Winton cars are as good in their line as Winton catalogue printing is in its, they are very good cars indeed. The new catalogue of the Winton Motor Carriage Co., of Cleveland, O., is a work of art from radiator to license number.

## TRY THE SECOND TIME

### Chicago Dealers Attempting to Float New Association—Changes in Windy City Retail Trade

Chicago, Feb. 3.—Several of the automobile dealers have been quietly working for a few weeks past to organize a new dealers' association along lines similar to those of the association which was formed last fall, but which soon lapsed into innocuous desuetude because of lack of interest.

It is hoped to awaken increased enthusiasm by adopting all the good features proposed in the former organization and adding other points which will aid in keeping alive the interest necessary to the success of the association. One new feature proposed is to establish a store for the sale of second-hand cars which are taken in trade by the members. These will be disposed of to the best possible advantage, and the receipts paid to the dealer owning the car, less a small percentage for handling. The association will make a uniform price for repairs and will deal with chauffeurs so that the best interests of the customer and dealer are conserved. The headquarters of the association will probably be at the New Southern hotel, Thirtieth street and Michigan avenue, and the members will meet there at the luncheon hour to discuss the affairs of the organization.

Hamilton W. Jones, who has been manager of the Chicago branch of the Electric Vehicle Co. for the past year, has resigned that position and will go with the Pope-Waverley Co. Frank Fanning, of the Fanning Cycle Co., will succeed Mr. Jones as manager of the Electric Vehicle Co. branch.

The Ford agency, which was first taken in Chicago by A. C. Banker, but which was of necessity released by him on account of the mandate that dealers in licensed cars should not also handle unlicensed cars, has been taken by John C. Zimmerman. Mr. Zimmerman will probably push the Ford exclusively and has prepared for an extensive trade, having opened a large salesroom in the furniture exhibition building at 1407 Michigan avenue. Mr. Zimmerman is ready for business and expects to open his campaign early.

Henry Ullman, the Chicago agent for the White steam touring car, will, on May 1, occupy the double store at 1404 Michigan avenue, now occupied by Pardee & Co. Mr. Ullman is at present in temporary headquarters at 1602 Michigan avenue, where he has industriously prepared for his 1904 canvass of the city in the interests of the steamer. He anticipates the establishment of a large salesroom, repair shop and garage for White users at the new location when he takes possession of it. He has already sold a number of the cars and is confident he can quickly popularize the machine when the season actually opens. The White has never been well represented here and this undertaking of Mr. Ullman's is expected to duplicate the success which has attended the sale of the White in other large cities.

John Fry, more familiarly and widely known as Jack, for a long time connected with the Winton company's Chicago branch, and later with the Electric Vehicle Co., this week assumed the management of the Chicago branch of the Apperson Bros. Automobile Co. This company has decided to push the sale of the

Apperson more vigorously in the Chicago territory and this engagement of Mr. Fry is the first step in that direction. The next will be the fitting up of a larger and more attractive store, it being probable that the space on Wabash avenue will be doubled. Fry is an excellent operator, as well as salesman, and can probably demonstrate the fine points of the Apperson to advantage.

### DETROIT SHOW READY

Detroit, Mich., Feb. 6.—Everything is ready for Detroit's automobile show, which will be held in the Light Guard armory, the largest exhibition hall in the city, the week of February 15. The success of the show has been assured since a week after the spaces were offered for sale, as practically all were taken the first week. Those connected with the enterprise who have been to the New York show, however, are very well pleased with the importance which the local event has in the eyes of manufacturers and dealers all over the country.

The fact that the local show is so highly regarded comes possibly from the position which Detroit has in the automobile world. At the other shows the exhibits of Detroit makers are among the most prominent, and the makers from outside of Detroit know that they are coming into a good automobile town when they send their exhibits here.



IN CALIFORNIA MOUNTAINS

Arrangements have been completed by the managers to transport some of the most attractive features of the Chicago show. A special express train will leave Chicago as soon as possible after the doors are closed. Trucks will be in waiting at the depot and as fast as the exhibits are unloaded they will be rushed to the armory, where they will be set up by the exhibitors. This train will arrive Sunday and everything will be ready Monday, when the show opens.

### MORE A. L. A. M. SUITS

New York, Feb. 2.—Two more suits have been filed by the Association of Licensed Automobile Manufacturers against importers who have declined to recognize the validity of the Selden and other patents controlled by the association. One is against C. I. Charley, importer of Mercedes automobiles, and the other against the Panhard & Levasseur American branch and Andre Massenat, its manager.

The new suit against C. I. Charley is brought under the Maxim and Pope patents in steering mechanism, and that against the Panhard company is under the Copeland patent on the universal ball point in the steering mechanism. This is the second suit against the former and the third against the latter brought by the licensed combination. Neither Andre Massenat nor C. I. Charley seem to be worrying over the situation.

## MOTOR BUSSES IN AFRICA

### In Successful Operation, Have Few Delays and Carry Many Passengers at a Good Profit

While there are not a great many exclusive automobile transportation companies in France the few which exist do a satisfactory business. At the recent Paris salon there was much talk on this subject and some of the manufacturers who make this kind of vehicle almost exclusively, booked large orders.

The Societe des Messageries Francaises d'Automobiles de Tunisie, the oldest transportation concern in France, has three 16-horsepower cars, two 12-horsepower, and two 8-horsepower machines. The latter are not used for the conveyance of passengers on account of their limited power and are simply used for merchandise carriage. All the vehicles were made by Panhard & Levasseur.

The vehicles run from Sousse to Sfax, in Africa and return the distance being a little over 79 miles each way. Every car can cover the route, both ways, in 24 hours, and ordinarily three vehicles are in service daily. After each trip the car is taken to the shop and thoroughly inspected, oiled and cleaned.

As it was found that the principle of success depended largely on the way the vehicles were handled and repaired, the company from the first took the very best workmen and drivers, paying good wages and getting on the other hand the very best returns as a result of this policy.

The chains of the cars are generally used over 1,800 to 2,400 miles before it becomes necessary to repair them. After having been used over this distance, new rollers are put in. The front wheels are equipped with compound tires and are used from 9,000 to 12,000 miles before they need repairs. The rear wheels are equipped with ironed tires and can be run fully 22,000 miles before requiring repairs.

Last year 2,692 passengers were carried on the road and since its organization, early in 1902, 5,349 passengers were carried. The trip costing \$5 per person, \$26,745 was received from passengers. The freight on each trip varies from 700 to 900 pounds. This does not include the mails and other government matters, which is fixed at an average of 2,200 pounds per day, and for which the company receives a subsidy from the government. With an ordinary load, including passengers, the cars weigh about 7,700 pounds.

The start from Sfax is made at 5:30 every morning and Sousse is generally reached by noon. The return trip starts at 1 o'clock and reaches Sfax about 7 o'clock. There is one regular stop of 30 minutes besides three or four much shorter ones, for the purpose of delivering and receiving mail and dispatches. When everything goes smoothly the 79 miles are covered at an average of 13½ miles per hour, including stops.

During last year the postal trip was made during 350 days. In the run to Sfax there were 323 arrivals without delays; seventeen delays of less than one hour and eleven with very long delays, of which five occurred after midnight. In the run to Sousse there were 319 trips without delay and thirty-nine which were delayed.

# AUTOMOBILE DEVELOPMENT

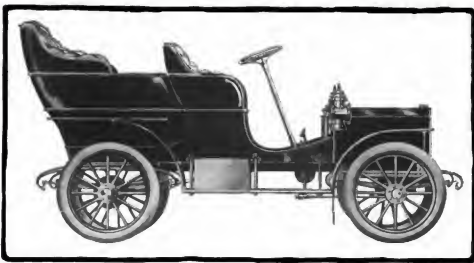
While the 1904 runabout of the Northern Mfg. Co., of Detroit, Mich., is in all essential features like that of last year, the new light touring car, produced for the first time by the company this season, differs entirely in system of construction from previous Northern practice.

The car is driven by a double, opposed horizontal motor placed crosswise on the front end of the running gear. The unique feature in the motor is that the

transmission gear case is cast integrally with the crank case of the motor. Each cylinder is cast in one piece with the cylinder head and valve chambers, and is bolted to the crank case. The assembled motor and transmission gear case thus forms a T-shaped structure having a three-point support on the frame. Constant alignment of the motor shaft and transmission gear are thus well assured.

All the bearings of the motor are large and all are incased. The motor is lubricated by a multiple feed oiler placed on the dash, with multiple sight feeds. The pressure is obtained from the crank case. There is an automatic speed timer in combination with the commutator, the whole device being contained in a glass covered case above the engine. This device is controlled by a governor and is not manually regulated, the entire speed control of the motor being by means of the throttle. This governing device also provides against back kicking when starting the motor.

The motor is cooled by the usual water system, including a tank radiator in front under the bonnet. The novel feature of this system is that the fan for forcing the draft through the radiator is made up of the fly wheel itself, which has twelve spokes each in the form of a fan blade. The motor is of 5-inch bore and stroke and is rated at 15 brake horsepower. The inlet as well as the exhaust valves are mechanically operated. The carburetor is of the conventional float feed spray type. The ignition current is furnished from a double set of batteries of five cells each. The muffler comprises two long cylinders placed parallel on the back half of the frame, the exhaust gases being discharged through one cylinder and then returned through the other to the final exhaust port.



THE NORTHERN TOURING CAR

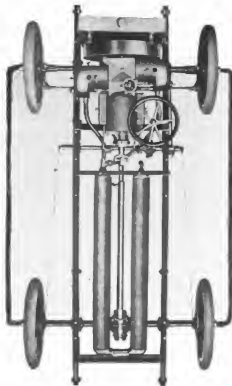
The transmission gear is placed directly upon the motor crank shaft and is operated by a system of planetary gears and friction clutches. There are no internal gears. The different shifts of the clutches are operated by a small lever under the steering wheel. There is means for adjustment of the clutches outside of the gear case. The transmission is direct on the high speed. The final drive is by propeller shaft with one universal joint between it and the trans-

mission gear shaft. The speed ratios between the motor shaft and the rear wheels are three to one on the direct drive; nine to one on the slow speed and nine to one on the reverse drive.

The controlling mediums of the car comprise the speed gear shifter; the pedal operating the throttle, which may be locked at any point to allow the operator to take his foot from it; and three brakes, two on the rear wheel drums and the third on the transmission gear. The wheel brakes are operated by a left foot pedal and can be locked to hold the car on a hill. The steering gear is of conventional construction, being chiefly characterized by a button which may be pressed with the foot to release the steering column lock so that it may be tilted forward for entering or leaving the car.

The running gear is long, having a wheel base of 84 inches. The track is standard and the wheels are 30 inches in diameter and fitted with 3½-inch detachable tires. The frame is of angle steel and the semi-elliptical springs are supported by continuous hangers which form the support for both ends of each spring.

The body is of the approved pattern of tonneau, fitted with canopy top. The front seat structure is single, but is provided with a center division to provide individual seats. The tonneau accommodates three passengers.



NORTHERN CHASSIS

## PEERLESS LIMOUSINES

The Peerless Motor Car Co., of Cleveland, O., is making a specialty of limousines, and offers at least a half dozen varieties, both in wood and aluminum bodies. The illustrations present four of the most notable examples of the efforts to depart from the conventional. One of these is called a metropolitan cab and



PATTERNS OF PEERLESS LIMOUSINE CARS.—AT THE LEFT IS THE METROPOLITAN CAB AND IN THE OTHER VIEWS ARE TWO STYLES OF FRONT SEAT CARS, ALL BEING OF 24 HORSEPOWER





MOTOR AGE

NAPIER'S SIDE DOOR LIMOUSINE

is unique in that the rear cab structure, which takes the place of the tonneau, is separated from the driver's seat by an aisle. This individual apartment has a circular front with sliding doors.

In less unusual patterns, the company has a side door limousine whose tonneau seats four persons comfortably and is provided with such luxuries of travel as a writing desk, electric lights, clock, engagement book, card case, toilet articles, powder puff, etc. There is also a four-passenger limousine entered from the front through a swinging door which is allowed to be opened by the folding of one front seat under the other. Then there is the common form of car in which the rear compartment is entered from the rear.

#### EXPORT TRADE GROWING

Figures showing the exports of automobiles from the United States to foreign countries during the calendar year 1903, together with a comparison for the two preceding years, have just become available. During 1903 the grand total was \$1,643,029, as against \$1,069,782 during 1902 and \$367,371 during 1901. The value of the exports during December last was \$223,518, as against \$43,689 during the same month of 1902. These figures afford striking evidence of the fact that our export trade in automobiles is growing by leaps and bounds and warrant the belief that this trade will pass the \$2,000,000 mark during the present year. When foreign countries buy over \$1,500,000 worth of our machines in one year, it is evident that American automobiles have reached a point of development that entitles them to rank with any in all the world.

#### NEW NAPIER CAR READY

The first Napier motor car for the Gordon Bennett cup race has been finished and it will be driven in the eliminating trials by Lieutenant Colonel Mark Mayhew, the vice-president of the Automobile Club of Great Britain and Ireland.

The car is of 100 horsepower and has several new features. A speed of 90 miles an hour is claimed. The engine is a four-cylinder,

and can be run at from 150 to 2,000 revolutions a minute. The frame is rolled steel, tapering at each end, where the strain diminishes. It is carried out in front to obviate having long spring hangers, and the radiator and engine are placed well to the rear of the front axle so as to put more weight on the driving wheels. The front axle is an H section steel forging and the springs are connected to the frame by short dampers. The radiator is of the Albany type, with an enclosed fan, driven by a belt from the crank shaft. In case the pump fails to work, the water would still circulate on the thermosyphon principle.

The radiator filling cap is very large, allowing additional water to be put in quickly. The centrifugal pump is driven by a chain from the crank shaft of the engine. The crank shaft is made hollow to obtain a maximum strength with a minimum weight. The inlet and exhaust valves are mechanically operated by the same cam shaft by a rod and lever, with an adjustable tappet, and all valves are fitted so they can be inspected by undoing the valve caps only.

The lubrication is by dip to all engine bearings and the gasoline is fed either by

gravity or pressure. There is a throttle on the steering wheel to facilitate handling the car over slow roads. The clutch is metal to metal and is self-contained; it can be used with oil or dry, and is not damaged by slipping.

All thrusts are taken up by ball bearings, and the clutch is fitted with three springs. The gearing is run through hollow shafts working on roller bearings. On the top speed the drive is direct, with no intermediate shafts running. The universal joint runs in an oil bath inside the gear box, and the back compensating square shaft is especially constructed to run without lubrication. The live axle runs throughout on ball bearings in an oil bath.

#### DARRACQ IMPORTATION

The following self-explanatory letter was recently received by the American Darracq Automobile Co., of New York, from its parent house, A. Darracq & Co., of France, the maker of the Darracq car:

Sireuses, France.—American Darracq Automobile Co.—We understand that there are several parties in the United States claiming to import Darracq machines besides yourselves, and we wish to say that you are the only authorized and sole agents for our cars in America and that we will not deliver any cars to any persons excepting through your house; and would further say that any one making statements to the effect that they can purchase our cars and represent us in the United States outside of your company are saying something that is false and malicious, and we authorize you to prosecute any and all such parties as you may see fit. You are privileged to publish this letter, which we hope will settle the matter once for all, as our relations have been extremely satisfactory, and as we desire those pleasant and new relations to continue and exist between our company and yourselves we have no desire to make any change.—A. Darracq & Co.

#### MAKING A BIG BUS

Work has begun at the factory of the Electric Vehicle Co., at Hartford, Conn., upon a twenty-passenger coach, which will be used in advertising "Blanke's coffee" at the St. Louis exposition, and the work is now in the draughting department. The car will have electric power, with enormous underground battery equipment, and solid Firestone tires. A central aisle through the car will give access to the seats, and a canopy top will be fitted. The wheel base will be nothing short of enormous. The big car will have a speed of 10 miles and battery capacity for 30 miles of operation. It will be novel in its pointing.



MOTOR AGE

MARK MAYHEW ON THE GORDON BENNETT NAPIER CAR

## THE READERS' CLEARING HOUSE

### CONTRADICTION HORSEPOWER

Newark, N. J.—Editor *MOTOR AGE*—Will you kindly explain the apparent contradictions in the following claims as to horsepower? One maker rates a 5½ by 6-inch single-cylinder motor at from 10 to 14 horsepower, while another rates a 5½ by 6-inch motor at only 8 horsepower. Here is a motor with a piston area of 23.75 square inches rated at 25 per cent low power than another motor of the same stroke and with a piston area of only 21.65 square inches. I have asked of the respective makers for explanation and have simply been told that "the other fellow lies." It seems to me that statements concerning horsepower are upon anything but a systematic basis. Will you kindly give a formula for estimating horsepower?—E. H. BALDWIN.

Possibly one maker gives indicated horsepower and the other brake horsepower. Possibly one maker figures the power at a much higher speed than the other. For example, the indicated horsepower of the smaller motor may be calculated by the common formula,

$$I. H. P. = \frac{P \times A \times S \times E}{33,000}$$

in which P is the mean effective pressure; A the area of cylinder in square inches; S the stroke in feet, and E the number of explosions per minute. Taking P as 60 pounds and E as 500 the equation would be

$$I. H. P. = \frac{60 \times 21.65 \times 5 \times 500}{33,000} = 10.75$$

Now the approximate brake horsepower of the larger motor may be calculated by Robert's formula,

$$B. H. P. = \frac{D^2 \times R \times R}{19,000}$$

in which D is the diameter in inches; S the stroke in inches, and R the revolutions per minute. The equation would be

$$B. H. P. = \frac{30 \times 25 \times 6 \times 1000}{19,000} = 9.5$$

Returning to the first formula and calculating the indicated horsepower of the larger motor the basis of 600 revolutions or 300 impulses per minute instead of 1000 revolutions and 500 impulses as used in the case of the smaller motor, the equation would be

$$I. H. P. = \frac{60 \times 23.75 \times 5 \times 300}{33,000} = 7.12$$

### APPARENT LOSS OF POWER

Warsaw, N. Y.—Editor *MOTOR AGE*—I built a 4 by 4 double cylinder motor, with cranks set at 180 degrees and atmospherically operated inlet valves. I do not get the power desired. My car weighs 1000 pounds. The motor runs without load at 1000 revolutions and drops to 700 when on high gear. When the throttle is open wide the engine races when in certain gears. Can I attach counter weights; if so, how?—GEORGE L. LONG.

A double cylinder 4 by 4-inch motor at 1000 revolutions would give 1½ horsepower, and at 700 revolutions not over 6 horsepower, which ought to be enough for the car for ordinary going. Probably the speed ratio between the motor shaft and the driving wheels is too low, which would account for the motor racing and for the limited speed of the car if the motor

develops 700 revolutions on the high gear. At 12 miles an hour the ratio figures 4.8 to 1, if the car has 28-inch wheels; it ought to be 3 to 1, which would give about 20 miles per hour, which is reasonable. It would be well to see that the piston rings are tight, that the valves are well ground, that the valves lift at least 3-16 inch and that the valve openings are 1½ inches. The springs may not be sufficiently strong to properly seat the valves. Double opposed are naturally balanced.

### TECHNICAL BOOKS

Chicago—Editor *MOTOR AGE*—In regard to the books for designers mentioned in a recent article in *MOTOR AGE*, where can these books be obtained?—JOHANNES GAY.

Among many books on automobile design and construction are the following: *Self-Propelled Vehicles*, by J. E. Homans, published by Theo. Audel & Co., of New York; *The Gas Engine*, by F. R. Hutton, published by John Wiley & Sons, of New York; *The Gas Engine Hand Book*, by E. W. Roberts, published by the Gas Engine Publishing Co., of Cincinnati, O.; *Gas Engine Design*, by E. J. Stoddard, published by Parker & Burton, of Detroit, Mich.; *The Automobile*, by La Vergne, published by David McKay, of Philadelphia, Pa.

### DOUBLE CHAIN DRIVE

Kearney, Neb.—Editor *MOTOR AGE*—In our recent reply to a correspondent asking the advantages of the double side chain drive, I think you overlooked one of the greatest advantages of such construction—that it does away with the plowing up with the sprocket and chain of roads which have high centers. I know of several owners who are continually making cross-country trips and who say they will never buy a second machine with a center drive sprocket 8 or 9 inches from the ground.—T. H. HOLTE.

The point is undoubtedly well made so far as some western roads are concerned; eastern roads are, however, not generally found with this disadvantage. Good roads would accommodate any vehicle.

### ROAD MAPS

Jackson, Miss.—Editor *MOTOR AGE*—What power would a two-cylinder motor or 4½-inch bore and 5½-inch stroke develop at 900 revolutions per minute? Is there a firm publishing road maps showing the routes between Detroit and St. Louis?—H. S. REYNOLDS.

The motor specified would develop about 6 horsepower. *MOTOR AGE* knows of no accurate road maps of the routes between Detroit and St. Louis. The American Motor League is preparing route books covering all sections of the country, but thus far the books issued contain principally eastern routes.

### POWER OF TWO-CYCLE MOTORS

Kewaupee, Wis.—Editor *MOTOR AGE*—Please give the power of a double cylinder two-cycle motor 6 by 6 inch at 350, 400 and 600 revolutions; also a double cylinder two-cycle motor 6 by 7 inch at 350, 400 and 600 revolutions. Will the 6 by 7 inch motor turn a 24-inch propeller at 400 revolutions and drive a boat 10 miles an hour; would better time be made with an 18 or 19 inch wheel turned at 600 revolutions with proper pitch?—A. DIERHAKEL.

A 6 by 6-inch double cylinder two-cycle motor would develop 12½ horsepower at 350 revolutions, 14½ at 400, and 21½ at 600; a 6 by 7-inch motor of this type would give 10½, 12½ and 18½ horsepower at 350, 400 and 600 revolutions, respectively. Four hundred revolutions for a 6 by 7 two-cycle marine engine is pretty fast; 350 revolutions with a 24-inch propeller—if two blades—is good work. A 24-inch wheel is none too large. Without knowing the size and build of the boat the question of speed is unanswerable.

### FRAMES FOR MOTOR CYCLES

Bristol, Tenn.—Editor *MOTOR AGE*—Will you tell me how to build a motor to be applied to an ordinary bicycle? What kind of tire should be used for rough work?—REX R. DAVIS.

It would not be safe to fit a motor to an ordinary bicycle, which was never intended for such violent thrusts as a motor gives. It would be far better to buy a motor cycle frame and parts from some reliable dealer. Most tire concerns now make detachable tires especially for motor cycles.

### COILS WITHOUT VIBRATORS

Corona, Cal.—Editor *MOTOR AGE*—Why is it that when the vibrator on a coil sticks the former does not act like a coil with no vibrator and give a spark when the commutator breaks the primary circuit? Can a vibrator coil be arranged so it will give a single spark when the primary circuit is broken if the vibrator sticks?—ARTHUR L. TAHER.

When the vibrator sticks the primary circuit is broken, and consequently there can be no action in the secondary until the primary is closed. If the vibrator is wedged away from the magnet and the primary circuit is completed the desired results will be accomplished.

### FOUR-CYLINDER MOTORS

Evansville, Ill.—Editor *MOTOR AGE*—Will you kindly tell me through the Readers' Clearing House what horsepower a four-cylinder motor of 4½-inch bore and 5-inch stroke will develop respectively at 850 and 1150 revolutions?—H. M. ENGLISH.

At 850 revolutions the motor would develop 24 horsepower; at 1150 revolutions 30 horsepower.

### FRICTION WHEEL MATERIAL

Evansville, Ind.—Editor *MOTOR AGE*—What is the best material to use in a friction wheel for driving an automobile? Is there anything better than the friction paper to run against a cast-iron disk?—W. M. COPELAND.

If the drive is from a disk to a roller, the friction surface on the disk should be of copper and the roller iron; if the drive is from a roller to a disk, the roller should be made of friction paper and the disk of iron.

### POWER AND POWER

Valley Ford, Cal.—Editor *MOTOR AGE*—Does a double opposed cylinder motor rated at 8 horsepower deliver more power than a single cylinder motor rated at 8 horsepower, calculating the horsepower from the bore and stroke of the cylinders and with both motors running at the same speed? In a double opposed cylinder motor does an impulse occur every revolution?—C. A. LA BARON.

This question is best treated by a Yankee answer—asking another. Which weighs more, a pound of feathers or a pound of lead? A double opposed motor receives an impulse each revolution.



# MOTOR

## DETROIT IN THE GAME

Detroit, Mich., Feb. 1.—There is going to be a lively season here during the coming year among the power boat men. The automobile boat craze has struck the city, and several speed boats are either projected or under way. One boat, the Rocket, belongs to W. B. Hurlburt, one of the best-known automobile men in the middle west. Mr. Hurlburt is one of the traveling representatives of the Cadillac company. Two years ago Henry Ford built his first racing machine—the one, by the way, in which he defeated Alexander Winton. After the season was over he dismantled the automobile with a view to building another. Hurlburt, who is associated with W. E. Metzger in the automobile business, bought the motor and he and Metzger, who is also an automobile boat enthusiast, designed a boat. They were too busy last summer to spend much time in the boat, which they named the Rocket, and they have only had her out a half-dozen times.

Last October, however, they had her out two or three days, and she proved herself a whiz for speed. The fastest boats on the great lakes are the big passenger steamships of the Buffalo Steamship Co. They make the run from Detroit to Buffalo on a schedule which called for 20½ miles per hour. One day Hurlburt laid in wait for the big Eastern States, of this company's fleet, and when she struck the river below Fighting Island, where it is broad and there are good opportunities for racing, he started out after her. He had four or five guests on board, and they were astounded at the way in which the frail little craft picked up the big fellow. Of course, the steamer was not going at top speed in the river, so Rocket overtook and passed her.

Meantime others have not been idle. A director in two well-known automobile companies in this city confided to a Motor Age man that the companies will have automobile boats out during the coming year. "We do not know how our boat will act, and we do not want to say anything about it until we know just how fast she will be by actual tests," said he. One of these boats is already under way and the Motor Age man saw the plans of the other last week.

As an evidence of the fact that eastern men believe that the automobile boat will become popular on the lakes, one of the best-known firms of eastern designers, Sadler, Perkins & Field, of New York, have opened up an office in Detroit in personal charge of Mr. Sadler. This firm has been pushing the automobile boat proposition, and has the lines of a number of boats, some of which are already under way. One boat which Mr. Sadler has turned out, for an eastern man, is 30 feet over all, 4 foot beam and when completed will weigh, including motor, 600 pounds.

## EXPECTS 21 MILES AN HOUR

Chicago is to be treated to its first meal of speed in the matter of power craft, according to Dan B. Southard, for whom the New York Gas Engine & Power Co. is at present building a boat having a length of 40 feet and a width of 3 feet 2 inches. This boat, the Terror, is to be in Chicago waters by April 5 and at that time the owner will be ready to make or entertain challenges for races, bun-buns, skirmishes or any other old way of



MOTOR AGE

A ST. LOUIS SPEED BOAT

testing speed qualities of all boats, and his own in particular, and this for any amount of money or just for fun if the stakes cannot be higher. The engine to be installed is a four-cylinder gasoline affair of the Speedway type, put out by the makers of the boat and designed by Mr. Sealury. It has all the up-to-date fixtures common to the latest type of automobile motors and its dimensions are 6 by 6 inches, turning the propeller at an estimated speed of 1,000 revolutions per minute. The engine is to be installed a trifle forward of the midship section. The boat will be almost flat under the stern, the sections bellying to midship, and rather sharp at the stem. It will be fitted with a turtle back forward and a spray hood. According to formula the motors will develop about 56 horsepower at 1,000 revolutions, and according to some authorities the necessary power to drive a boat of this size through the water at the estimated speed would be about 120 horsepower.

## BOAT SHOW IN BOSTON

Boston, Feb. 1.—All the spaces for the motor boat, canoe and boat equipment show, to be held in Horticultural hall by the New England Motor Boat Association, March 14 to 19, have been taken. A. W. Toppan, agent for the Truscott Boat Mfg. Co., Smith & Mabley, Hollander & Tangeman, H. H. Buffum, Norwalk Brass Co., and Georges Richard-Brasier are the prominent exhibitors, with many smaller concerns seeking space.

# BOATS

## BIG BOAT FOR PLEASURE

Cleveland, Feb. 1.—James Corrigan, of this city, is having built one of the largest and finest launches on fresh water. It is being built by the Electric Launch Co., of Bayonne, N. J., from the latter's own designs. She will be 95 feet over all, 16 feet in width and 4 feet draft. The frames are to be of heavy oak and the planking tongueleaf yellow pine, copper fastened throughout. The raised pilot house and the long low trunk cabin will be of mahogany. The roof of the cabin house will be arranged for a promenade deck, with an awning and accommodations for chairs. The interior will be in mahogany, white and gold. There will be a large private stateroom with a double berth for the owner, and eight swinging Pullman berths, divided by portieres, accommodating as many guests. When the berths are up, the space provides a large saloon, which will be used also for a dining room.

The yacht will be propelled by a 200-horsepower three-cylinder gasoline engine. An electric lighting plant will be installed, with storage battery auxiliary power, furnishing lights in the cabins, and a powerful search light on the pilot house.

The boat will carry a crew of three men and will be completed April 15. She will be used on the St. Lawrence river and on the lakes.

## A ST. LOUIS SPEED BOAT

Although not built especially for speed, but rather as a river cruiser, the Bachelor is considered at least as fast a small craft as graces the middle waters of the Mississippi river. She is 45 feet over all and has a width of 7 feet, with extremely low freeboard, being purely for river use. Her 3-cylinder automobile motor, made by the St. Louis Motor Carriage Co., has dimensions of 5½ by 6 inches, and at its normal speed develops about 24-horsepower. The boat has comfortable and commodious decks, a generous cabin, and is much in evidence on the waters about St. Louis and Alton, Ill.



MOTOR AGE

THE TERROR

## From The 4 Winds



People under 15 years are not permitted to drive automobiles in Berlin.

The G & J Tire Co., of Indianapolis, Ind., has received an order to supply the Japanese army with 3,600 pairs of G & J bicycle tires.

There were 1,022 candidates for membership in the Touring Club of France, in December. The membership of the club was 80,504 January 1.

The gold medal offered by the king of Italy for the automobile show at Turin will be awarded to the concern exhibiting the best mechanical invention.

It was E. H. Cutler who was elected third vice-president of the National Association of Automobile Manufacturers, instead of R. E. Olds, as reported in the daily papers.

The Wayne Works, of Richmond, Ind., is making an experimental automobile, and should it prove to have merit, the company may add automobiles to its list of products.

The Detroit Motor Works, of Detroit, Mich., has listed all its various patterns of Starite spark plugs in a new booklet, which clearly specifies diameters, threads and other points necessary in ordering spark plugs. The line is large and is fully illustrated.

R. C. Morton, of San Jose, is building a new kind of automobile which he says is a departure from anything now on the market. He describes the engine as a vibrationless gas motor, the main feature being that the engine has no cylinder heads, combustion taking place between two pistons.

An automobile ordinance is being prepared by the council of Rockford, Ill., which will have some new features. In the new bill the license clause will be eliminated, calling on owners of automobiles simply to register their names and the numbers of their machines.

The speed limit will be the same as heretofore and the number of lights to be carried will be fewer than under the old ordinance.

The Bielefelder Maschinen Fabrik, of Bielefeld, Germany, manufacturer of the Durkopp motor cars, made a net profit of \$230,618 during the business year which ended September 30.

A steam motor cycle has been built by H. d'Espujols, formerly an engineer in the French navy. The motor of 1½-horsepower is in the rear and communicates with a wheel upon the drive wheel. Benzine is used for fuel.

The South Milwaukee Automobile Co. has been organized at Milwaukee, Wis., by E. F. McGow and E. H. Bettinger. The company will rent, repair and sell automobiles, and it is the intention, in the course of time, to commence manufacturing.

The Sebnuck-Siemens concern of Nuremberg, Germany, recently completed a tractor for the German army. When empty the vehicle weighs 16,500 pounds and about 22,000 pounds when loaded. It is equipped with a 40-horsepower Daimler motor. Its average speed is a little over 10 miles per hour.

Victor Sambolino, of Turin, Italy, has sent a request to the minister of public works for the privilege of organizing an automobile service to cover nearly 250 different roads. Eight will lead toward France and six toward Switzerland. The cost of transporting passengers is figured at a fraction over 1 cent each per kilometer.

Some idea of the rapid increase in the manufacture and sale of automobiles during the past two years may be obtained from a comparison of the export figures. In 1901 the total exports of automobiles and parts amounted to \$367,371; in 1902 the exports were \$1,069,782 and in 1903, \$1,643,929. In December, 1902, the exports amounted to \$43,609, and in December, 1903, reached \$223,548,

thus making an increase of over 500 per cent in December, 1903, over the corresponding month of the previous year.

J. A. Scott is organizing a company to assemble from 300 to 500 light runabouts and seeks information and prices on an order of 160, 250 or 500. His address is box 202, Alton, Ill.

The Eastern Automobile Co., of Montreal, Canada, is building a show room and garage at 5 Berthelet street. The structure has a frontage of 45 feet and a depth of 107 feet. The company will handle the Winton, Ford, Rambler, Stanley and Waverley cars, and will also carry a full line of supplies.

The fire chief of Hanover, Germany, has issued a booklet in which he urges the use of automobile engines, not only in cities but also in the country. He states that an automobile engine can render service within a radius of at least 15 miles, while horse-driven fire engines cannot be used over more than 4½ miles.

According to French consular reports there is a great demand for automobiles and motor cycles in Odessa, Russia. Last year about forty cars and motor cycles were sold, of which two-thirds were of French manufacture. Light cars are especially wanted. They must be stronger in construction than the cars which are generally used in countries having good highways.

Belgian automobile and motor cycle clubs are working together in an effort to have the finance minister order the principal roads of the country put in better shape. It has been planned to try and convince the minister that one of the best things that could be done for motorists and the trade, would be to make new direct roads to Paris and Berlin.

One of the most useful of the various office souvenirs which have been sent out by members of the trade is the little clock representing the compliments of the American Ball Bearing Co., of Cleveland. The clock proper is contained within a metal base, which comprises a ball race, within which visible balls support the clock and remind the time keeper that ball bearings save time in automobilizing by reducing friction and increasing speed.

The Automobile Club of Bavaria has decided to arrange a number of special practical meetings for the benefit of horses. Members will come with their cars and then go to the horse market or to some other public place, where owners having anti-automobile instinctive horses will be requested to meet. The automobiles will then be driven fast or slow, according to the requirement and other instructive horse play will be done.

The Taff Vale Railway Co., of England, has been experimenting with a service of motor coaches on the line running between Cardiff and Penarth, and the success of the experiment has been so marked that at a recent meeting of the directors it was decided to invite bids for the supply of six motor cars of the same design, except that they are to have more accommodation for baggage. The delivery of the cars must take place in time for the summer traffic.

# AMERICAN MOTOR LEAGUE

## OFFICERS:

ISAAC R. POTTER, President,  
Potter Building, New York.  
CHARLES E. DURYEA, First Vice Pres.,  
Reading, Pa.  
W. GRANT MURRAY, Second Vice-Pres.,  
Adrian, Mich.  
R. W. MERRIHEW, Third Vice-Pres.,  
154 Nassau St., New York  
ROBERT L. STILLSON, Secretary,  
150 Nassau St., New York  
FREDERICK B. HILL, Treasurer,  
32 Winifred St., Boston.

National Headquarters:  
150 Nassau Street, New York



## CHAIRMAN OF NATIONAL COMMITTEES:

LEGISLATION—George R. Eldwell, New York, N. Y.  
ROAD IMPROVEMENT—R. E. Hild, Lansing, Mich.  
LOCAL ORGANIZATION—Charles F. Potter, Denver, Colo.  
TOURING—W. H. Baker, Buffalo, N. Y.  
TECHNICAL—Charles E. Duryea, Reading, Pa.  
MEMBERSHIP—Frank A. Ryan, New York, N. Y.  
SIGN BOARDS—John B. Price, Hazleton, Pa.  
RACING—A. G. Ratchelder, New York, N. Y.  
PRESS—Joseph Fatorcel, Philadelphia, Pa.  
HOTELS—Francis N. Balo, Newburg, N. Y.

## OFFICIAL BULLETIN

### THREE TIMELY PROVERBS

Stones and sticks are flung only at fruit-bearing trees.—PERSIAN.

A majority is always better than the best repairee.—DISRAELI.

They act as a congregation of peanuts would act when a coconut rolls in.—GEORGE FRANCIS TRIN.

### ABOUT LEAGUE MEMBERSHIP

The American Motor League is the largest organized body of automobilists in the world. This fact is mentioned mainly for the reason that A. M. L. members have a right to know it and to take courage from the result of the year's work. It is not a subject for boasting, for the league is large only by comparison and must be many times larger before its day of real usefulness arrives. A great deal of hard work has been done, but the burden has been carried by the few. It should be more evenly distributed—more widely assumed. The league has a purpose. It is entitled to the affection of its friends and to the respect of everybody. It is winning its way in all directions and its officers are trying to direct its growth in a systematic, sensible and effective way. They need the cooperation of every member and will be glad to have a cheering word from every member who will do a little, or attempt a little, in the direction of an enlarged membership.

### THE NEW YORK CONVENTION

The league had a very successful "good roads day" at Madison Square garden. It is not easy to run a successful good roads meeting alongside the attractions of an automobile show, but it is now shown to be possible. Hon. Martin Dodge, director of the government bureau of road inquiries at Washington, and his principal assistant, Hon. M. O. Eldridge, delivered interesting addresses, the latter presenting a series of stereoscopic views showing the important roads in Europe and America. Hon. James MacDonald, highway commissioner of Connecticut, talked of the splendid work done in his state, and Hon. Frank D. Lyon, of Albany, represented the New York state engineers' department in an interesting account of the progress of the good work in the Empire state. Hon. James W. Abbott, of Denver, and Hon. R. W. Richardson, of Omaha, talked of government work in the west and of the progress of the National Good Roads Association in its efforts to extend the agitation and to induce the several states to legislate for improved highways. State Commissioner Buhl, of New

Jersey, was kept at home by personal illnes, and State Commissioner McClintock, of Massachusetts, was detained at Boston by official business. Both sent interesting letters.

On the second day the time of the convention was given largely to the consideration of technical subjects. Professor R. C. Carpenter, of Cornell University, delivered a most interesting address on the progress and development of engine and motor building; E. W. Roberts followed with a practical talk—illustrated by sketches—on "Common Motor Troubles and How to Avoid Them;" Charles E. Duryea exploited in a most entertaining way some new ideas on "Tires and Tire Troubles," and State Chemist Henry Souther, of Connecticut, president of the Southern Engineering Co., of Hartford, presented a paper which was not read, owing to Mr. Souther's inability to reach the hall before the hour of adjournment, but which will be published and distributed.

### MISUNDERSTANDING ABOUT FARES

A great many automobilists joined the league before the convention and secured the benefit of reduced railroad fares. A number of others came to the automobile show in the innocent belief that the reduced rate concession was given to everybody. In some cases their personal serenity gave way under the influence

of a harrowing disappointment. Many of them are excellent people and to them this explanation is given:

1—In December last the league obtained a special rate concession of a fare and a third to members attending the A. M. L. convention.

2—The league was required to make contract with the railroads, binding itself—a, not to certify any certificate for persons not members of the organization, and, b, to reimburse the railroads for every ticket or certificate found in possession of walpers or brokers, or other third parties, after having been certified by the league officers at the convention.

3—On the day before the opening of the show at Madison Square garden the following letter was received at league headquarters:

New York—Isaac B. Potter, President A. M. L.—Referring to my letter of 21st ultimo, observe in the New York Tribune of yesterday an item which conveys the impression that the concession authorized for your assembly will be available for the automobile show.

We of course do not know whether this item was inspired by you, but as previously advised, the reduction applies only to your body as an association. Moreover, it is contrary to the rules of the several lines to publicly advertise reductions on the certificate plan, and therefore unless we have your further assurance that all the conditions will be fully complied with by your organization, the concession will necessarily have to be cancelled.—J. B. FARMER, Commissioner Trunk Line Association.

4—The league printed and sent out 10 days before the convention a large number of circulars containing the following paragraph in bold-face type: "No reduced rate will be given to any person not holding the proper certificate, and only members of the American Motor League will receive the benefit of this reduced rate."

5—At the present writing the league has been called upon to pay the sum of \$117 to the railroad association, to cover the value of tickets found in the hands of scalpers.

6—It does not appear to be necessary to state further facts to justify the refusal of league officers to certify the coupons presented by persons not members of the organization. The league, by the prudent foresight of its officers, saved to its members many thousands of dollars which they would otherwise have been compelled to pay out; but it did not thereby assume the functions of an insurance company nor any obligation toward persons, however worthy, who were not within its ranks

### THE AMERICAN MOTOR LEAGUE

is an organization to promote the interests of all users of motor vehicles; to ascertain, protect and defend their rights; to oppose and prevent the enactment of unreasonable and oppressive laws; to encourage the use of motor vehicles by agitation and instruction; to provide its members with printed routes, maps and guide books by which touring may be facilitated and encouraged; to promote the work of improving the public roads and the erection of proper guide boards, and other signs necessary to guide and warn the users of motor vehicles; to select and appoint official hotels, repair shops and supply stations where its members may obtain reliable service at reasonable rates.

### WHO MAY BECOME A MEMBER

"Any man or woman, 18 years of age or over, of good moral character and respectable standing, friendly to the motor vehicle and its interests, shall be eligible to membership."

(Constitution, Article 2, Section 1.)

The League is extending its membership in all parts of the country. We invite all friends of the movement to join and aid in building up a powerful organization.

NO INITIATION FEE. ANNUAL DUES \$2 IN ADVANCE, OR \$3, INCLUDING 1 YEAR'S SUBSCRIPTION TO MOTOR AGE.

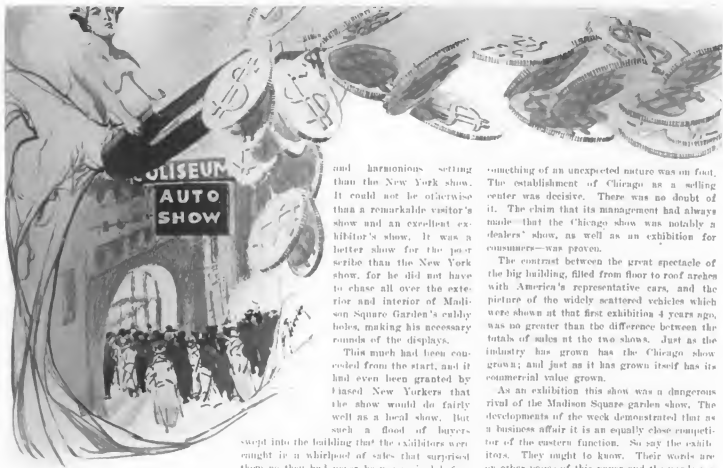
# MOTOR AGE

VOL. V. NO. 7

FEBRUARY 18, 1904

\$2.00 Per Year

## CHICAGO SHOW A SURPRISING SUCCESS



**C**HICAGO is the natural selling center of the automobile trade. This was all but demonstrated at the show which closed Saturday night at the coliseum, for never did a last night's bell ringing and horn tooting mean such a commercial success as did the noise which scurried people out of the building that night that the exhibitors might dismantle their displays. The greatest surprise on earth was the Chicago show. It surprised visitors, exhibitors, management and newspaper men.

It had been expected that it would be a profitable affair, for each Chicago show has disconcerted the previous one, and last year's coliseum exhibition was conceded to be a very valuable trade function. The exhibition itself, as described in *MOTOR AGE* last week, was a truly representative one, with a more spacious

and harmonious setting than the New York show. It could not be otherwise than a remarkable visitor's show and an excellent exhibitor's show. It was a better show for the poster than the New York show, for he did not have to chase all over the exterior and interior of Madison Square Garden's caddy holes, making his necessary rounds of the displays.

This much had been conceded from the start, and it had even been granted by biased New Yorkers that the show would do fairly well as a local show. But such a flood of buyers-

swept into the building that the exhibitors were caught in a whirlpool of sales that surprised them as they had never been surprised before at a show.

At New York they would not have thought much of it beyond ordinary gratification. But at Chicago—much knocked Chicago whose every feature, from her streets to her shows, has been hammered, hammered, hammered, by the whole battery of genteel and other discs throwers of the country—it was almost a shock.

The buying fever struck the show early, and representatives of New York papers who were accustomed to write beforehand stories of Chicago's fair success as a little western affair, began rushing to the telegraph offices to get under cover.

Something had struck the west and it was automobilizing. The Chicago coliseum show had been waited for, and when, early in the week, the afternoon crowds began to equal and even exceed the evening crowds, it was known that

something of an unexpected nature was in fact. The establishment of Chicago as a selling center was decisive. There was no doubt of it. The claim that its management had always made—that the Chicago show was notably a "dealers' show, as well as an exhibition for consumers—was proven.

The contrast between the great spectacle of the big building, filled from floor to roof arches with America's representative cars, and the picture of the widely scattered vehicles which were shown at that first exhibiting 4 years ago, was no greater than the difference between the totals of sales at the two shows. Just as the industry has grown has the Chicago show grown; and just as it has grown itself has its commercial value grown.

As an exhibition this show was a dangerous rival of the Madison Square garden show. The developments of the week demonstrated that as a business affair it is an equally close competitor of the eastern function. So say the exhibitors. They ought to know. Their words are on other pages of this paper and the words are just as they were spoken, in answer to the one casually put question "How was the show?"

The Chicago show probably did not result in so many cars sold to agents as did the New York show. Its total of sales of cars and parts and accessories probably equalled, if it did not exceed, that of the eastern show. It sold to more agents and to more individuals.

The New York show came first. It had first chance at the agents. The agents had first chance at it, and many of them bought up the available output of several makers. Thus, at the Chicago show, more than one prominent exhibitor of cars frankly admitted that most of his sales were to consumers simply because at the eastern show he had disposed of all the cars that could be allotted to agents, and that hence at Chicago agents looking for cars had to be turned down, to seek for other lines.



It has been the policy of some makers to sell their output in several large groups, the sales being made to choice agents, each of whom will place a large order. Makers of this class in several instances sold out at the New York exhibition to agents of the eastern territory. Had they cars at the Chicago show to sell to agents they would have sold them.

The agents were there—there from all over the country. Some of the best agents in the country, it is true, closed at the New York show for their lines for the season, but not all of the large agents did so, while totaled, large and small, it is probable that more agents from more states were at Chicago than at New York.

New England would rather attend the New York show; but the great middle and far west would naturally rather come to Chicago. Chicago sells the furniture of the whole country west of the Allegheny direct from its exhibition buildings in the heart of its automobile trade colony, and sooner or later this same district will be the automobile selling center for the same major section of the country. New York is the natural selling center for imported cars intended for wealthy motorists. Chicago is the natural selling center for the American automobile for the American automobilist.

With its commercial success, according to some exhibitors exceeding that of the New York show; according to others, equalling it; and according to the rest, giving it a close run; and with its time of holding 3 weeks later than the New York show, one may readily imagine the position the Chicago show would occupy were the dates of holding just reversed. There is not a shadow of doubt that the Chicago exhibition would far outstrip the eastern show.

In no characteristic advantage did the Madison Square garden show lead, except in the presentation of foreign made machines. If it lead, it lead by virtue of precedence of date. Upon the imported cars the continued prosperity of the industry does not depend. The industry rests upon the success of American machines, of which the Chicago show was the conceded exponent before the eyes of the buying public. It gave these most generally useful models of them a greater boost than did the eastern exhibition. Held prior to the latter, it would render even the social advantages of New York inadequate in attempting to effect a similar success.

Thus are the two shows compared. The eastern show first, and with the advantages of a big spread of high-priced foreign cars and the peculiar characteristics of New York for furnishing a week of social enjoyment—great; the Chicago show second, handicapped by big sales to agents at New York; and without New York's display of foreign cars, New York's class of wealthy large car buyers and New York's social attractions—equally as great, perhaps greater.

The sales at Chicago were, of course, mainly of small and moderate size cars, and of the popular American style of large car which sells for less than \$3,000. There were numerous sales of more expensive cars, enough, in fact, to bring the general average of sales up to \$1,300, a high figure in view of the great number of runabouts sold. As nearly as it could be estimated by questioning, and with due allowance for exaggeration, it is probable that 3,500 cars were sold. At the assumed average price of \$1,300, the total of the sales of cars would thus represent \$4,550,000.

How much the sales of parts, accessories and



WINDSOR T. WHITE, NEW PRESIDENT OF THE N. A. A. M.

sundries aggregated in dollars it is impossible to estimate, but inasmuch as the exhibitors of such goods were most decided in their expressions of gratification, and inasmuch as many of them said they sold more goods than at New York, is presumable that the total would add enough to the total of car sales to raise it well above the five-million point.

The total attendance during the week was slightly over 100,000, an average daily attendance of over 14,000. These figures are taken in the way that all exhibition attendance figures are taken, by the number of persons passing in through the doors. Deducting the repeaters, it is probable that the net attendance was 75,000, or an average of 10,000 a day.

The attendance was a revelation. Never before had the attendance been anywhere near so great. Never before had the attendance of a Madison Square garden show been eclipsed. And when Chicago outdoes New York in show attendance it means something more than the net difference, for the Chicago crowd has in it a larger percentage of persons directly interested in the goods displayed than has the New York crowd, which is apt to be largely made up of persons who attend for entertainment or curiosity or to be there. New York is a great town for functions which people attend just to be there. For instance, Madison Square garden has been in its particular line of business so long that it has come to have a regular clientele which attends any and everything that is on tap, from a 6-day bicycle race to an automobile show.

The course of the show ran evenly during the week. The weather was mainly cold, but after the first day was dry and on the whole more agreeable than that which marked the New York show. Demonstration of cars was more successfully carried on, for while it was often cold enough to endanger freezing of water in radiators and to render riding in open cars far from pleasant, the long line of machines kept outside the coliseum was generally busy. On the whole the weather of the week was much better than that of any previous Chicago automobile show period.

The attendance also was almost uniform on the different days, though Friday was the best of all. The largest crowd in the building at any one time was probably on the closing Saturday afternoon.

There was a great scurry of individual buyers, for many had spent several days examining the different cars and had been unable to make up their minds upon which to purchase. As late as Saturday night at 10 o'clock belated purchasers were noted fitting

from one exhibit to another worrying over the final selection of their 1904 automobiles.

Each day the building began to fill about 10 o'clock, for then the out-of-town dealers, who were admitted free in the morning, reached the ground that they might have ample opportunity to talk business before the afternoon rush began. Once the afternoon crowd arrived, there was hardly any distinction between day and evening except for a thinning out around dinner time. This was not so perceptible as at the New York show, for the Chicagoans started out earlier in the evening than does the New Yorker, and so the afternoon and evening crowds almost met each other going out and coming in.

A large portion of those who stayed for both sessions ate their evening meal in the coliseum restaurant. It can accordingly be said that from 2 in the afternoon until 10:30 in the evening the whole building—main hall, annex and balcony—was filled on each of the 7 days of the show.

The last night was the characteristic last night and the tooting of horns started early, a little earlier than at previous shows, for several of the exhibitors intended taking their displays to Detroit for the local show there and were anxious to start moving out of the coliseum as soon as possible. In fact, before 11 o'clock the whole gallery was practically dismantled, and about a third of the cars had been run off the main floor.

The advance news stories and the articles of the first few days of the show in the Chicago daily papers were followed by pages and pages of show matter such as had never appeared in Chicago papers before. This was caused both by the increased interest in the game and by the more liberal advertising of the exhibitors. Several of the daily paper men explained it on the ground that there being no daily automobile paper run at the show to attract the advertising which the Chicago dailies felt rightfully belonged to them, they had laid themselves out to cover the show in an open handed manner.

At any rate the matter, general news stories or write-ups in consideration of advertising, the Chicago papers met the show itself in giving New York a run for its money in such matters, and it is possible that by next year there will have been developed in Chicago a line of automobile newspaper men such as now exists in New York, much to the benefit of both the sport and the trade.

The New York trade papers, papers supposed to represent the industry exclusively, were less generous toward the show and accordingly toward the interests represented than were the Chicago daily papers. Some of them had previously tried to "knock" the show and thereby diminish its commercial value to the exhibitors, who at the same time are trade paper advertisers, and when the show opened colored their stories with their natural or assumed prejudice of this western show.

This same policy in a more marked degree has been pursued each year since the holding of a Chicago show. The reason for it may be anything, but it is probable that a part of the reason is the absolute inability of these same papers to cover a Chicago show properly and publish the paper in time for extensive distribution at the Chicago show. They work New York as their own field, naturally, and try to make of it the whole automobile industry. They cannot and never could cover a Chicago show and get the papers to it as

MOTOR AGE gets to the New York show, at which it is the first on the field with the complete show story.

Of all of the New York papers only one had an extensive, comprehensive, well gotten-up story of the Chicago show—this was the Automobile. The other papers by their inability to report the show well, sought to make the show out a little local affair, not worthy of their close attention.

This show is over, and like that of a few weeks ago in Madison Square garden, has been placed in the eminent success column of automobile history. It represented the American industry truly and squarely and made a lot of sales for the industry, and here, after all, by the greatest success of a show, for the automobile builders, with the exception perhaps of Duryea, are in the business for the money, and the cash book balance is the best gauge of a national exhibition.

Great was the show and great should be the praise thereof!

### LEAGUERS GET TOGETHER

Chicago, Feb. 13.—The first banquet ever given by the American Motor League, and without doubt the beginning of annual affairs of this nature, was held at the Victoria hotel, this city, Friday night and Saturday morning, commencing at 11 o'clock and breaking up at 4.30. It was not the biggest banquet that has graced a show week, but it bespoke two things, the perseverance of the American Motor League and the establishment of a function which shall perhaps some day be known by its hundreds of plates.

It was a pleasant affair, attended by an even fifty, who ate good victuals, drank good wine and listened to good music and good talks. The speechmaking was informal, good natured and characteristic of a body representing the interests of the automobilist wherever he may be found.

Frederick W. Carberry, of Chicago, acted as toastmaster. He first introduced Sidney R. Gorham, counsel for the Chicago Automobile Club, who spoke on "Automobile Law Makers and Breakers." Frank X. Mudd, of the Chicago club, told some good stories and prophesied great things for the league and American road building. President John Farson, of the Chicago club, read a brief address on "Good Roads the Nation's Salvation." Charles E. Duryea, as founder of the league, spoke convincingly of the purpose of the organization, and Augustus Post, of New York, told of some of the lessons of good and bad roads learned in his extensive touring.

C. E. Hawkins, of Pittsburg, leader of the many league enthusiasts of the Smoky City, told how interest in the league had been made to grow there and spoke also upon the general usefulness of the body. Isaac B. Potter, president of the A. M. L., spoke to the broad topic, "The American Motor League." He did not mine matters but in his characteristic, straight-from-the-shoulder manner presented the purpose, work and accomplishments of the league in a way that would have convinced even an A. A. enthusiast that the pioneer organization was the real thing in automobilizing organization. Mr. Potter has been "roasted" more or less by disgruntled newspaper men, but if there was ever an organizer who knew what he was organizing, why he was doing it and how he was pursuing it, Isaac is that man. The League song, a rearrangement for the occasion of the Stein song, was

sung by Frank B. Lawson, the party joining in the refrain. Then the whole crowd arose, sang a couple of verses of Auld Lang Syne, shook hands and agreed to make the next annual banquet an affair of ten times the consequence. Mr. Farson's address was as follows:

The subject of good roads is inseparably linked with that of our nation's prosperity. Had our forefathers been mindful of the need of rural communication, we as a nation, could have made no progress. With ample development of our system of roads, who will be so rash as to place Illinois upon the nation's prosperity?

To the real importance of good roads we as a people have been strangely blind. It is a pertinent question whether the American public has not exhibited a remarkable one-sidedness in its attitude toward the subject of carriage and transportation. Rightly judging that the nation's superiority is impossible without the highest advancement in methods of transportation; we have led the world in the construction and wide development of national highways of steel, but other highways—highways upon which even the traffic of steam roads is dependent—we have neglected sorely. We do not stop to think that the mileage of the railroad bears an insignificant ratio to the vast mileage of the wagon road. I believe it would not be extravagant to say that several Illinois counties have more miles of country roads than the entire railroad mileage of the state. Have we done wisely to neglect this great system of public highways?

Why should a farm's distance from its market city or town be so great a factor in its value? Why is it true that on the outskirts of a small town are found the most prosperous farms, the largest barns, the best residences? Why does the prosperity of our farms decrease so rapidly as their distance from the market town increases? It is one of our boasts that modern science has nearly eliminated distance. We do not reckon our distance from New York today as a thousand miles. We say we are only 24 hours away from the metropolis. Every court house in Illinois is nearer to the capital at Springfield today than it is to most of the farms within its own borders. I ask you, is this fair? With all other considerations aside, is the state doing its duty to the farmer when it encourages and aids the development of all departments of trade and commerce save that one alone which is the foundation of all trade? Is not our wisdom far and away behind that of the ancient Romans, who saw that the real secret of their great national prosperity in the Augustan era lay in that wonderfully perfect network of roads which linked the capital with every part of the empire—roads whose greatest value was not their use in time of war but rather as a medium for ready interchange of commodities and intelligence in the ordinary industrial pursuits of the people, for Rome's material wealth lay not in its captives and in the spoils of foreign conquests but in its own internal development.

Unfortunately many parts of our state are not within reach of the material we must have for good roads, so that their construction is more than normally expensive, but are the people of Illinois to be deterred from a positive advancement because their neighbors may have the same improvements at a lower cost? We have permitted this excuse for bad roads to be given until it is thoroughly worn out. It can hardly be a matter of congratulation to us that while our Illinois

country roads are so notoriously black and heavy that the brick pavements of many of our county seats are covered with mud from the beginning of winter until its end, the neighboring state of Indiana has literally filled the entire commonwealth with the best of gravel and stone roads, until rural travel there is a delight. We must face the obstacles that confront us and surmount them. Illinois is destined for far greater achievement in trade. Not only are we sadly neglecting the country roads, but in our blindness we are forgetting the urban prosperity itself is so dependent upon the prosperity of the farms that it cannot exist without the other. The improvement of farm roads can scarcely be of more benefit to the farmer than to the town which he makes his market; the advantage accrues to the community at large. 'Cuncta sunt communia' the systems of road improvement and learn from them that the \$200,000 or \$300,000 they have expended has scarcely, if at all, increased the tax rate. Again and again in this found to be the result of road improvement, and many reasons conspire to bring it about. Every city lot and every acre of ground within any proximity to the improvement is enhanced in value and the appreciation of a county's property through the construction even of an extensive system of county thoroughfares is found in many cases to be more than twice the additional revenue made necessary by the expenditure there. Often an immediate result is the influx of population whose wealth is thereby added to the wealth of the neighborhood.

Whether fortunately or otherwise, I shall not assume to say, but it seems to be true that the personal convenience of the people who are using or are likely to use country roads for their own pleasure has done more for the promotion of good roads than agencies that have a purely utilitarian basis. It seems a little remarkable that in a country so bent upon material prosperity this should be true. It is a fact nevertheless that the bicycle craze of a few years ago was a most effective factor in road improvement, and what was then a short lived impetus is now upon a permanent footing in the demand which the users of automobiles are making for a more perfect system of roads.

### CHICAGOANS MEET AUTOMOBILISTS

One of the pleasant events of the show week was the dinner given to the officers of the N. A. A. M. Friday noon at the Union League Club by John Farson, president of the Chicago Automobile Club. Beside the officials of the association there were present several of the men who have been and are now leaders in Chicago's progress, and this commingling of local men of prominence with the national leaders of the automobile industry awakened a feeling of good fellowship, the results of which may be far-reaching in extent. Among the speakers were Ferdinand W. Peck, E. R. Thomas, Samuel A. Miles, Charles E. Duryea, Isaac B. Potter, C. H. Gillette, Ralph Booth, G. C. Prussing, F. R. Babcock, F. X. Mudd and Elmer Apperson. The guests seated at the famous "round table" of the club were: F. W. Peck, G. C. Prussing, F. R. Babcock, R. H. Booth, J. M. McCutcheon, Dr. J. B. McFetrick, James Keeley, G. W. Hinman, J. S. Seymour, J. E. Wright, Lester L. Jones, Dr. F. C. Greene, W. G. Lloyd, J. W. Duntley, J. A. Charter, Charles W. Gray, B. H. Marshall, T. J. Hyman, I. M. Cobb, J. A. Ellis, P. C. McDonald, G. M. Ambrose, O. M. Donaldson, Dr. Wilcox, F. X. Mudd, E. E. Swartzkopf, Augustus Post, J. A. Kingman, C. E. Duryea, W. R. Denmore, R. D. Chapin, W. T. White, Max Whitney, T. W. Goodridge, F. C. Armstrong, C. H. Gillette, I. B. Potter, E. Apperson, J. B. Deibler, C. E. Metzger, E. R. Thomas, E. F. Kirk, E. H. Parkhurst, J. S. Bennett, T. B. Van Abtine, C. A. Grant, C. A. Benjamin, W. S. Austin, G. P. Dorris, Thomas Hay, E. D. Shurmer, S. A. Miles, R. W. York, H. S. Leyman, F. R. Stearns, R. W. Spangler.



A REMINDER OF THE GOOD OLD SUMMER TIME

# GENTLEMEN, WHAT OF THE SHOW?

HERO AUTOMOBILE Co.—Great, great.—Dan Crary.

WESTON-MOTT Co.—Fine; sold all my goods.—Mr. Mott.

ROYAL MOTOR CAR Co.—Couldn't be better.—J. W. McRea.

J. H. DAWSON MACHINERY Co.—Well satisfied.—Mr. White.

AUTOCAR Co.—I do not think much of it.—Wallace L'Hommiedieu.

LOCOMOBILE Co. OF AMERICA—Great success in every way.—B. G. Sykes.

AMERICAN DARRACQ AUTOMOBILE Co.—Very satisfactory.—A. J. Picard.

GEORGE N. PIERCE MFG. Co.—Very satisfactory, indeed.—Percy Pierce.

ST. LOUIS MOTOR CARRIAGE Co.—It's a pretty good show, sure enough.—G. P. Dorris.

REGAS AUTOMOBILE Co.—Good; made a lot of agents, and got the money.—H. J. Sager.

THOMAS B. JEFFERY & Co.—Fine and dandy; finest ever happened.—J. F. Gunthor.

R. E. DIETZ Co.—We did about as well as at New York, but the sales are way ahead of last year.

STUDEBAKER BROS. MFG. Co.—Very good; in some respects better than New York.—W. L. Hibbard.

OLDS MOTOR WORKS—It's as good as the New York show and the best Chicago ever had.—R. D. Chapin.

MARBLE-SWIFT AUTOMOBILE Co.—Grand success; we are much pleased and guess all the others are the same.—G. B. Swift.

W. K. PRUDDEN & Co.—Better than we expected; glad we came; did three times the business we expected.—W. K. Prudden.

HAYNES-APPERSON Co.—Not quite as good as New York on account of coming after it, but we are well satisfied.—Frank Nutt.

COLUMBUS MOTOR VEHICLE Co.—The show is a damn sight better than the New York show; we are satisfied with the business done.—W. C. Anderson.

POPE MOTOR CAR Co.—From my own standpoint as a Chicago dealer it has been fine and the people from the factory are also well satisfied.—Mr. Jamieson.

ELECTRIC VEHICLE Co.—It has been a good show. Our only kick is that the railway company did not get all of our ears here so that we could sell them.—W. W. Burke. Fine, fine; good, good; perfectly satisfactory.—A. L. Healey.

ROCHESTER STEAM MOTOR Co.—We did a most satisfactory amount of business, and expect to be here again next year. We received many orders for larger patterns of our motors and feel highly pleased at the prospect for future business.

E. R. THOMAS MOTOR Co.—Oh, by God! The best that ever was.—E. R. Thomas.

TWENTIETH CENTURY MFG. Co.—This has been the best of all shows.—Fred Castle.

KIRK MFG. Co.—This has been a good local show. The sales were mostly to consumers.—Ezra Kirk.

APPERSON BROS. AUTOMOBILE Co.—It is better for us than any show has ever been, but I am opposed to all shows.—Elmer Apperson.

FREDONIA MFG. Co.—I think it's a damn good show, if you want to know; in fact, it is better than was New York—Edmund F. Dodge.

MORGAN & WRIGHT—This show was certainly a great success. We did more business than in New York; in fact, I might say 70 per cent more, and this is not exaggerating.

HARTFORD RUBBER WORKS—This was one of the greatest shows ever held in this country and the amount of business was most gratifying. We did 100 per cent better than last year and made a great many individual sales.—Mr. Gillard.

E. J. WALLIS & Co.—The show was a great success and we did more business than at the New York show. Chicago is especially an agents' center, and it seems to me that at least twice as many agents were here as at the eastern exhibition. New York's show is more of a fashionable affair, while the one in this city is a decidedly commercial affair. Our

business compared to that of last year is simply immense and we will certainly come back and try to get a great deal more space.

DIAMOND RUBBER Co.—The show was an immense success and turned out way beyond our expectations.—O. S. Tweedley.

WOODS MOTOR VEHICLE Co.—Just look at our sample cars covered with signs and just look at our smiling faces.—M. H. Whitney.

NORTHWESTERN STORAGE BATTERY Co.—Business was very good and we feel satisfied; did three times as well as last year.—Mr. Somes.

VEEDER MFG. Co.—We did not do quite as much business as in New York, but are nevertheless well satisfied. Compared to last year the results were a lot better.—Mr. Biddle.

WINSTON MOTOR CARRIAGE Co.—We have done twice the business we did at the New York show. We were pleased there; we are pleased beyond expectations here.—Charles B. Shanks.

FISK TIRE Co.—Big success; very great success. Did some good business, but not quite up to the amount we did in New York. Compared to last year's business the increase is very decided.

AUTOMOBILE SUPPLY Co.—Compared to last year's show, we did 100 times, yes 1,000 times better. We sold more goods than we expected, and will not be able to fill some orders for 30 days. Of course, we will be here next year, and won't have any kick coming if we do as well as this year.—M. Simons.

DETROIT MOTOR WORKS—A success! Well, I guess so. Sold about seven times as much as at the eastern affair. Compared to last year, it is simply astounding. Then we sold 1,200 plugs, and this year we disposed of 11,500, not including orders for several thousand under consideration. We will surely be back next year.—F. J. Watt.

WESTERN MOTOR Co.—We did exceptionally well, and far ahead of any previous show transactions. We were much surprised at the great number of inquiries for heavy engines for commercial vehicles, especially trucks and farming instruments, such as plows, threshers and binders.—E. Rutenberg.

PAN-AMERICAN POLISH Co.—From our point of view this show was simply remarkable. We did fully 150 per cent more business than last year, and better than at the New York show. There were many more out-of-town dealers here than at New York and we have only praise for the way everything went on here.—Charles H. Beecher.

HEREZ & Co.—We did a great amount of business and we well satisfied. We got orders which we could not have received had we not been here. Compared to last year's business I will say that we did about three times as well. The out-of-town trading public was very strong, and several came from distant states. They would very likely not have trav-

## NEWSPAPER KNOCKING THAT "WENT WRONG"

Ample floor space and an effort at decoration makes a splendid display possible, but, as usual, the New York exhibition had minimized trade interest. \* \* \* In point of sales and attendance none but the most perivoid adherents of the Windy City assert that the Madison Square garden show will even be approached.—The Motor World.

\*\*\*

A petition not to hold a national show in Chicago next year was circulated among exhibitors. It received many signatures and will be presented to the N. A. A. M. executive committee. \* \* \* The attendance the first 2 days was good, but exhibitors complain that there is no demand for catalogues.—The Horseless Age.



did as far as New York. We will be back here next year.—Mr. Herz.

EMIL GROSSMAN.—It has been better than we expected.—Emil Grossman.

GRAY & DAVIS.—Greatest show ever held; way ahead of last year; well satisfied with results.

AMERICAN HALL, BEAKING CO.—More buyers here, and consequently bigger business than at New York.

WAYNE AUTOMOBILE CO.—It's a grand success; sold more cars than at New York.—R. J. Sullivan.

WHITE SEWING MACHINE CO.—It's all right; a good show.—Webb Jay. It's a good show; it's all right.—Winslow T. White.

STANDARD CARRIAGE LAMP CO.—Business was most satisfactory; just wish it will be like it always and we would never complain.

MANHATTAN STORAGE CO.—We have opened twenty-two new accounts here and are well pleased with the week's business. Our individual sales have been large.

RICHMOND LAMP CO.—We did pretty well and feel satisfied. We really did not come here with the idea of transacting much business, but wanted to be with the others. We are surprised at the amount of business we have done.

C. K. ANDERSON.—Our exhibit here was not so large as at New York, but our sales have been most satisfactory. We are glad we came, and despite the fact that some of our goods were delayed in transit, our business equals in volume that of the New York show.

PEARSONS BUGGY ROBE CO.—Great business; I am surprised at the extent of it. We came in at the last moment, expecting to sell a few of our robes, and we have taken orders from all parts of the country. We did not exhibit at the New York show.—J. P. Davis.

A. H. FUNKE.—While the show was a great success and while we did some very satisfactory business, we must say that almost all of our big deals were closed out at the New York show. Yet this is no reflection on the Chicago exhibition and we certainly expect to come back next year.

DEMMELE & CO.—We have been doing business with a great many of the largest Chicago concerns for the last 4 years and simply came here to meet some of our friends. Most of our deals were wholesale and we are satisfied with the result. The show was a grand affair, and the people seemed greatly interested.

**A NEW YORK AUTOMOBILE PAPER'S COMPLETE STORY OF THE CHICAGO SHOW—A SHOW DECLARED BY MANY EXHIBITORS TO BE GREATER THAN THE EASTERN EXHIBITION. ■ ■ ■ ■**

The fourth annual Chicago automobile show opened at the coliseum on Saturday last. The doubt expressed as to the holding of the show in face of the stringent anti-fire regulations in the western city, was probably responsible for the absence of many pretentious exhibits, particularly of foreign cars. Still the great hall was comfortably filled, and despite the inclemency of the weather the attendance on the opening day was fairly representative.

The peculiar construction of the coliseum, its main entrance being midway in the hall, prevents a free glimpse of the show being as imposing as at Madison Square. The long vista which greets the visitor in the New York show shows is hardly compensated for by the first view one gets of a cross-section of the Chicago exhibit.

On the other hand, the fact that the entire exhibit is located on one floor, thus avoiding the piece-meal effect, as seen at Madison Square, is an advantage in favor of Chicago. With these differences must be added the consideration that the Chicago show is now coming to be regarded as a purely local or agents' show, and not in any way as a rival to the national automobile show in New York. As such, however, the display was more than creditable, nearly all the exhibitors having transported to Chicago the fittings of their stands used here. The only notable make of car shown which was not seen at the New York show is the Premier, of Indianapolis. There are, however, a large number of accessories which did not make their appearance in New York, to be seen in the gallery at the coliseum. The exhibits, which were all described in detail in Automobile Topics Daily and weekly so recently, looked none the worse for their thousand mile journey. A large number of them had already been on exhibition at Philadelphia, and probably will make the circuit of other exhibitions before being returned to their showrooms in New York.—Automobile Topics.

CULLMAN WHEEL CO.—The show was a great success and we did a great deal more business than we anticipated. We are glad that we decided to exhibit and expect to be here again next season.—Otto Cullman.

HINE-WATT MFG. CO.—We are more pleased with the results of the Chicago show than with the amount of business done at New York. Compared to last year we did fully twice as well.—W. A. Hartley.

HYRNE, KINGSTON & CO.—We did much better than at New York and feel well pleased. The enthusiasm of the public was a decided pleasure to witness, and simply goes to show that it is taking more and more interest in the new method of locomotion.—Mr. Kingston.

P. J. DANEY.—The show was an immense success in every respect, and I did more business than expected. In fact, I refused some orders, not being able to make promises as to delivery. Chicago is much superior to New York for show purposes as a much greater number of dealers visit here.—P. J. Daney.

FORD MOTOR CO.—It has been very tame.—James Couzens.

ELMORE MFG. CO.—Fine; business was splendid.—James H. Becker.

AMERICAN COIL CO.—In comparison with the New York show, we did better here. We are well pleased and consider the show a great success.—H. Moriarty.

CHICAGO GASOLINE STORAGE CO.—We sold more gasoline storage outfits than we expected to at the beginning of the show, and, of course, we are feeling in a good humor. We could stand a continuous show.

STEEL RAIL CO.—A bowling success. Pleased with the results? Well, I guess. Only regret we cannot handle the amount of business offered us. People seemed a lot more intelligent than last year, and this shows the interest taken in automobile matters.—Mr. Tilden.

MOTOR CAR SUPPLY CO.—We did better than we expected and feel well pleased with the results. Besides the orders placed with us we have so many prospects that we feel somewhat surprised even at the immense success attained by the show. During the first few days we disposed of the entire stock of several lines.—W. W. Robinson.

ROSE MFG. CO.—The sale of Neverout lamps to the western and southern dealers has been highly satisfactory. It has been a buying crowd, and our sales were far in excess of expectations. From a business standpoint the Chicago show has been a complete success. Most of the sales here have been to dealers and individuals.—S. F. Bancroft.

BRENNAN MFG. CO.—We find more buyers here than at New York, but we can hardly judge the amount of business done yet, as many orders come from people after they go home. They come here to look and then send their orders by mail. For 10 days after the New York show we were busy receiving orders from visitors at the show, and we expect to see the same conditions here. The Chicago show has been a great success for us from a business standpoint.—P. H. Brennan.

A. L. DYKE AUTOMOBILE SUPPLY CO.—We are more than satisfied with the results of this show. We did a tremendous amount of business which we estimate to be fully 150 times as large as that we did last year. Although we had a fair number of salesmen we simply could not wait on everybody on several occasions. The enthusiasm of both public and dealers was much greater than at former shows and goes to show that people are rapidly getting interested in and acquainted with matters pertaining to the automobile trade.—A. L. Dyke.



# MOTOR AGE

Published Every Thursday by  
THE TRADE PRESS CO.  
1303 MICHIGAN AVENUE CHICAGO  
Telephone Calumet 7011

New York Office: 116 West 18th Street.  
London Office: American Publications  
Press, 19 Manor Park Rd., Haringey, N. W.

Entered as Second Class Matter  
March 1, 1904  
Post Office No. 100  
Chicago, Ill.  
Acceptance for mailing at  
special rate of postage provided  
for in Act of October 3, 1917  
Authorized by Post Office  
Department

Entered as Second Class Matter  
March 1, 1904  
Post Office No. 100  
Chicago, Ill.  
Acceptance for mailing at  
special rate of postage provided  
for in Act of October 3, 1917  
Authorized by Post Office  
Department

Entered at the Chicago Post Office as Second Class Mail Matter

Subscription, Two Dollars per Year  
Foreign Subscription, Four Dollars

Any Newsdealer may obtain Motor Age through  
the Western News Co., Chicago, or any  
of its branches, on a returnable basis

## THE LIMOUSINE

**N**O DOUBT can exist about the limousine. It has become recognized as a permanent style of automobile. It is the forerunner of an extensive line of enclosed vehicles made possible by the fact that the operation of an automobile does not include the control of any exterior element.

It has been a good seller at both the national shows. There has been created a demand for it in cheaper models. Small limousines are bound to appear in great number.

It has a market in every class. In one class it has a market as widespread as the United States. This is the form in which an open car, of accepted design, is so equipped that it may be readily and quickly converted into a canopy top car, and then, further and with equal convenience, into a limousine.

The American wants a vehicle for all purposes. Adaptability is much to him. The first maker to put out a fairly light car which may be used as a single seat car; an open tonneau car; a canopy top tonneau car, and as a limousine car, will find his market waiting for him. Let him add an interchangeable delivery wagon top, and his book of orders will still more overflow.

## A COMPARISON

**S**UFFICING out the life of a little 5-year-old girl by a ponderous trolley car on the eve of St. Valentine's day has even now been forgotten by nearly all save those to whom that little body was dear.

The motorman has made the usual explanation of being faultless and continues to rush his car through crowded thoroughfares, and past street intersections at a dangerous speed and with reckless abandon, changing his gong as a warning to pedestrians and vehicle owners to clear the track.

His speed is limited only by the capacity of the motor and the current supplied through the wire; his regard and that of his employer for the public has long since ceased—and the public simply stands for it.

Motormen of this class are not overburdened with sympathetic natures or brains or worldly goods—punishment for misdeeds could deprive them, as a rule, of nothing more than liberty.

But let another view be taken of the matter.

An automobilist, sufficiently endowed with worldly goods to claim ownership to a machine, more than likely born and raised in an atmosphere of refinement and if so possessing some fragment of sympathy; with much to lose besides his freedom.

Presume, for the moment, that he had been responsible for this little one's death; that he had disobeyed the law governing speed; that he had obeyed the law which prohibits the sounding of a bell or horn as a warning—what would have been his fate?

It is safe to predict an answer. He would have been thrown in jail, he would have been compelled to fight a damage suit, and he would have been everlastingly condemned by that portion of the public which does not enjoy automobilism.

The particular motorman in question may have been guiltless; he may be the exception which proves the rule, or, rules, cited—his case is used simply as an example.

All of this tends to prove that the city's regulation of automobiles is one thing; and of trolley cars another—that the public's opinion is as warped as that of the city council.

There is no comparison between the intelligence and the nature of the two sets of operators; there is no comparison as to the question of control of the two machines.

But the misdeeds of the public utility corporations have so long been crammed down the public's throat that the latter turns to the automobile and its driver, knowing full well that that appetite for vengeance which it has and to which it is entitled will in a measure be satiated.

Is this right?

## INCONSISTENCY

**T**HE NEW YORK papers, which in reporting the Chicago show, said there were no important automobile makers present who were not at the New York show, with the exception of the Premier Mfg. Co., are respectfully requested to send their advertising rates to the St. 1 Motor Carriage Co., the Mead Cycle Co., importer of the Benz, the Austin Automobile Co., the Mitchell Motor Car Co., the Wayne Automobile Co., the Synnesvedt Vehicle Co., the Auburn Automobile Co., the Marr Autocar Co., T. L. Tineber, the Bartholomew Co. and a score of others. There is no better way on earth to get advertisements than to tell a man by inference that he does not amount to a row of beans.

## NO CLASS LEGISLATION

**N**O DECISION has so clearly defined the rights of the automobile and the automobilist as that recently made by Judge Hall of the appellate court in Chicago, which rightly places the new vehicle beyond the pale of class legislation.

It would seem but natural that those opinions which defined the status of the bicycle would apply almost equally well in the case of the automobile, but such hopes had about been abandoned until this decision was made.

There exists today, in the various cities, counties and states of this country, the most inconsistent and absurd lot of laws relating to the automobile and its use that is possible to conceive, such as would be creditable to Mark Twain's humor or Richard Mansfield's seriousness or both.

The appellate court's decision will be ex-

tensively quoted; it will have a bearing upon all future legislation and a powerful influence upon any court to whose attention it is brought.

It will eventually do away with all the little inconsistencies now sticking up in statute-books and may even haul down the farmer's right hand, raised as a warning for the automobilist to stop until the prejudiced gentlemen from the country pass.

The outcome must be of a beneficial nature; the decision will be a part of the automobile's history.

## STAYING AHEAD

**A**S USUAL, MOTOR AGE was most in evidence of all the papers at the show.

None of the New York papers appeared until Saturday, and then not in sufficient quantity to make much impression by distribution. So MOTOR AGE enjoyed 2 whole days to itself in the distribution of show report numbers, and added another link to its unbroken chain of "beats" on the occasion of prominent events—New York show last year, Chicago show last year, Gordon Bennett cup race, the endurance run in October, New York show this year and this Chicago show.

\*\*\*

Perhaps it is not prejudice which is accountable for many of the numerous hardships worked on automobilists by municipal authorities. The old lines have been worked so hard and so extensively that city officials may have taken to the automobile as a welcome source of graft. At least the posting of an officer at the big bridge over the Mississippi river at St. Louis to extract a \$10 note from each automobilist who drives his car to the world's fair city during the fair next summer is likely to be so considered.

\*\*\*

"The paper's in!" joyously shouted the western representative of a New York automobile paper a little while before the horns which denote the closing of a show began to toot last Saturday night. MOTOR AGE gets its exhibition issue to the New York show before the New York papers. The latter evidently consider it an achievement of note to get to the Chicago show at all with their show issues.

\*\*\*

The selection of Windsor T. White as president of the National Association of Automobile Manufacturers to succeed Milton J. Roll long resigned, was a happy choice. Mr. White is not only an excellent executive of careful and conservative judgment, but occupies the almost unique position in the trade of having an interest one way or another in the Selden patent matter.

\*\*\*

The authorities of New Caledonia, a French colony, have decided to give a large subsidy for the purpose of establishing an automobile passenger line between Noumea and Bourail, a distance of about 165 miles. Three Turgan Fox 24-horsepower gasoline omnibuses have been selected for the line.

\*\*\*

There were two classes of people at the show—those who rode in automobiles and those who dodged them. It is to be hoped that many of the latter class will transfer themselves to the first class before another show is held.

# THE AUTOMOBILISTS' RIGHTS DEFINED

The recent decision of Justice Ball, of the Appellate court, in the case of the city of Chicago vs. Albert C. Banker, by which the latter "and others similarly situated" are given the right to traverse the streets without a license or number is of such consequence to automobilists in general that Motor Age has secured the following review of the case by the defendant's attorneys, William A. Jennings and Daniel V. Gallery:

In summing up the case, Justice Ball said: "In the case at bar the right of appellee to use the streets is undoubted. It is true that he must use them without interfering with the safety of others in the exercise of the same right. Subject to that limitation, his right cannot be regulated by an ordinance. The fact that an automobile is a comparatively new vehicle is beside the question. The use of the streets must be extended to meet the modern means of locomotion.—Moses vs. Ry. Co., 21 Ill., 515. The speed of the automobile may be regulated, and reasonable safety appliances, such as gongs and brakes, may be required; but to compel one, who uses his automobile for his private business and pleasure only, to submit to an examination and to take out a license—if the examining board sees fit to grant it—is imposing a burden upon the class of citizens in the use of the streets not imposed upon the others. We must, therefore, hold this ordinance, so far as it obliges appellee to take out a license before he can use his own automobile in his own business or for his own pleasure, beyond the power of the city council, and is therefore void."

New methods of carriage do not change the law relating to carriage. A failure by the city of Chicago to understand this fact brought about the automobile legislation which the Appellate court declared unconstitutional and void. The self-propelled automobile possesses the same rights and is subject to the same restrictions as the horse drawn vehicle. They are simply different means of arriving at the same result, change of place by the occupant of the vehicle. The novelty of the automobile is, as the Appellate court said, "beside the question." The mistake of the city expressed in the license ordinance and in the number ordinance is a very common mistake, and one which the courts have been repeatedly forced to correct. Every step forward in the means of transportation; the change from walking to horseback, then to the vehicle drawn by animal power, to the railroad, to the bicycle, then to the automobile has been met by hostile legislation. Prejudice in favor of the old way was slow to yield. Almost invariably resort to the courts was necessary for a declaration of settled principles applied to new forms.

The answer made by our Supreme court nearly 50 years ago to a bill brought to prevent the use of the streets by a railroad company with its engines and cars is peculiarly applicable to objections against the general use of the automobile, and its more or less closely related vehicle, the modern trolley car:

A street is made for the passage of persons and property; and the law cannot define what exclusive means of passage and transportation shall be used. To say a mode of passage shall be banished from the streets, no matter how much the general good may require it, simply because the streets were not so used in the days of Blackstone, would hardly comport with the enlightenment of the present age. Steam has but lately taken the place to any extent of animal power for land transportation and for that reason shall it be expelled from the streets? For the same reason camels must be kept out, although they might profitably be used.



MOTOR BICYCLES IN GERMAN MILITARY SERVICE



A GERMAN MOTOR BICYCLE CLUB



GERMAN MILITARY MOTOR CYCLIST

Some fancy horse or timid lady might be frightened by such thoroughly sober. Cars on street railroads are now generally drawn by horses, but who can say how long it will be before it will be found safe and profitable to propel these cars by steam or some other power?—Moses vs. Railroad Company, 21 Ill. 515.

The decision of the Appellate court will probably end attempts by the city of Chicago to single out the automobile for restrictions

not imposed on other vehicles. If an appeal from the decision is taken the only result to be reasonably apprehended is that the power of the city to enact such legislation will be still more effectively denied.

For much of the prejudice existing in the public mind against the automobile and for the legislation which is only an expression of that prejudice a few automobilists are responsible. In utter disregard of the rights of others on the street and in willful violation of laws governing the speed of vehicles they dash through the streets at a rate menacing life and property. Such injuries as the public has suffered are in nearly every instance due to excessive speed. There are laws now in force to reach this crime, and these laws should be enforced with the utmost severity. That the vehicle is capable of high speed is no excuse for the use of this speed to gratify the sensation it produces, to the terror and probable injury of others present on the street for business or pleasure. Public prejudice and the laws giving it utterance will disappear with

the advent of a sane use of the automobile. In 1902 the license ordinance was passed. In 1903 another ordinance, known as the numbering ordinance, was passed. The numbering ordinance requires the number to be taken from the license and placed upon the rear of the automobile. Therefore, the numbering ordinance is supplemental to the licensing ordinance, is dependent upon the same for its validity and existence and falls with the licensing ordinance.

The Appellate court says the licensing ordinance is class legislation because it imposes a burden upon the users of automobiles from which the users of other vehicles are exempt. The numbering ordinance does the same and is therefore void.

In brief, a court of appellate jurisdiction has said that the automobile is nothing but a common vehicle, propelled by a new method and has the same privileges and is subject to the same regulations as other private vehicles, and cannot be excluded from the streets simply because it is something new and was unknown to our ancestors.

Automobilists cannot be singled out and made the subject of special legislation and have penalties and burdens imposed upon them from which all others are free.

The legal status of the automobile has been defined and all that can be required of its users is reasonable care and caution in its use, no more and no less than is required of the users of all other private vehicles, which is and will be borne in mind and observed by the great majority of automobilists.

## "DUTCH" HAS C. B. HOPES

Charles W. Miller, of Chicago, may be one of the contestants in the Gordon Bennett cup race, as he is now negotiating with one of the makers of a car entered for the race. Miller is a former long distance bicycle rider, and was a prominent figure during the palmy days of the bicycle.

# DETROIT SHOW OPENS

**Light Guard Armory Beautifully Decorated for the Third Affair of the City of the Straits—Exhibits About All Ready Monday Night—First Night Crowd Indicates a Success**

Detroit, Mich., Feb. 15.—The show is on. That oft-quoted sentence means a lot, too, for at 12 o'clock this afternoon there was not a sign or trace of a single car of the special express train of eleven cars which had left Chicago early Sunday morning for the City of the Straits with the pick of the big exhibits which had been on view in the coliseum but a few hours before. Urbane Seneca G. Lewis, the secretary and treasurer of the Tri-State Automobile Association, under whose auspices the Detroit show is given, was looking worried, and President William E. Metzger was rushing around like a hen with her head out off. Metzger had seen the train loaded before he left Chicago, Sunday, and he could not account for it having been nearly 30 hours on the road and still not a sign of it.

It was a little after 1 o'clock this afternoon when a telegram was received stating that the train was in the railroad yards, after a 30-hour fight with the weather. Then there was a rush of automobile men. Nearly a hundred employes and managers had come over from Chicago on the Sunday morning and Saturday night trains and they were as worried as were the others. When they learned that the train was here, every available truck—automobile or otherwise—was brought into service and soon Larned street was lined with trucks, delivery wagons, express wagons and every sort of vehicle. Even the big moving vans—conveyances which are unique in Detroit—were brought into play.

The decorators had already been at work on the armory since early Sunday morning, so that all that was necessary was to get the exhibits into place, the private decorations up, etc. But this represented an enormous amount of work. At 5 o'clock there was not an exhibit in place. At 7 o'clock they were still taking automobiles, chassis, carburetors—in fact everything but garages—into the armory. A small army of men was at work and so fast did it labor that at 8 o'clock, when the doors were thrown open, not only were most of the exhibits in place but the decorations in most cases were complete. In another half hour, when the crowd began to arrive, things were pretty well in shape and there was no more confusion, or lack of preparation than there always is on the first night of a big show.

And it is a big one—the biggest Detroit and the middle western states have ever seen and bigger than anything that has taken place this year with the exception of the New York and Chicago shows, of course. President Metzger and Secretary Lewis did themselves proud this year. The show is by far the most beautiful that has ever been given in the city. The exhibits, of course, are handsome, because of the cars themselves, even if they were not for the fine settings of palms, etc., which the manufacturers have given them.

There is a marked contrast between this show and the first one given by the association 2 years ago. That was the first that had ever been given. This is the third that has opened in this city and the strides which have been made in the automobile world since the 1902 show are tremendous.

The big armory is a beautiful sight. Several hundred dollars have been spent in decorations for the occasion. They were put up by one of the best decorators in the west. Yellow, white and red are the prevailing tints. Great streamers of these reach down from the lug centerpiece to each end of the hall. The whole armory, in fact, is under a great canopy of yellow, red and white. Below these hang great balls of the national colors and stands of colors are draped artistically around the big trusses which support the roof.

Under the overhead decoration, picture hundreds of incandescent lights, solar lamps, Pincush lamp and a dozen search lights shooting their penetrating rays over the ceiling, down the long aisles and into the booths in the galleries, crowd into the hall 2,000 people, and you have an idea of what Detroit's automobile show looks like—not so large or quite so fine as the two big shows, but probably as interesting to the visitor, for pretty nearly every manufacturer in the country is represented, either directly or through his Chicago or Detroit agents.

It is pretty hard to pick out any particular exhibits in a show where they are all of such uniform excellence. There is a lot of interest naturally in the Detroit productions, several of which are seen locally for the first time, such as the Reliance, the Wolverine and the Mmrr. The fine exhibit of the Packard company was one of the centers of interest. Here several patterns of the big handsome car of the company were on exhibition, as well as a chassis, a beautiful piece of the motor-makers' art.

Near the Packard exhibit is the Ford. Henry Ford, the man who "skated" a mile in :30.25, on Lake St. Clair in the famous "999" a month ago, is in charge. The "999" is not here. It is too well known to Detroiters, however, to make it such a drawing card here as it is outside. Then, too, there is the Cadillac and Olds exhibits, side by side. In the Olds exhibit is a fine collection of the different cars which this company now manufactures. The Cadillac exhibit was not all up tonight. Mr. Metzger was too busy helping other exhibitors to attend to his own, and all he had was three or four cars.

One of the interesting exhibits from a local standpoint was that of W. A. Russell & Co., who have been in the business locally but a short time. They have a big Barrage, the Winton, and a number of others. But it takes too much time and space to enumerate all the good features. There is not a single exhibit which did not have some distinguishing feature to attract admiration and attention. The list of exhibitors at the show are as follows:

Cadillac Automobile Co., Detroit, Mich.  
Olds Motor Works, Detroit, Mich.  
Pope Motor Car Co., Indianapolis, Ind.  
Electric Vehicle Car Co., Detroit, Mich.  
Packard Motor Car Co., Detroit, Mich.  
Autocar Co., Ardmore, Pa.  
Ford Motor Co., Detroit, Mich.  
White Sewing Machine Co., Cleveland, O.  
Hammer Summer Auto Carriage Co., Detroit, Mich.  
Pope Motor Car Co., Toledo, O.  
Merlin Sign Co., Detroit, Mich.  
Haynes-Apperson Co., Kokomo, Ind.  
Held Mfg. Co., Detroit, Mich.

Winchester Repeating Arms Co., New Haven, Conn.  
Union Metallic Cartridge Co., New York.  
American Harraq Automobile Co., New York.  
W. A. Russell & Co., Detroit, Mich.  
Twenty-first Century Mfg. Co., New York.  
Roger J. Sullivan, Detroit, Mich.  
J. P. Schneider, Detroit, Mich.  
Brisson Mfg. Co., Detroit, Mich.  
Veeder Mfg. Co., Hartford, Conn.  
Imperial Wheel Co., Flint, Mich.  
Hager Bros. Mfg. Co., Kenosha, Wis.  
C. P. Spittford, New York.  
Welch Motor Car Co.  
W. E. Metzger, Detroit, Mich.  
Automobile Equipment Co., Detroit, Mich.  
Rose Mfg. Co., Philadelphia.  
W. W. Weber, Detroit, Mich.  
Detroit Canoe & Car Works, Detroit, Mich.  
Continental Carriage Co., New York.  
James Vaughan, Detroit, Mich.  
Berk Tire Co., Chicago, Ill.  
Thomas P. Clark, Pontiac, Mich.  
Reliance Gas Engine Co., Detroit, Mich.  
Charles Kaezner Mfg. Co., South Bend, Ind.  
William Hjerth & Co., Jamestown, N. Y.

## SHOW PROGRESSES SUCCESSFULLY

Detroit, Mich., Feb. 16.—With band concerts every night, a shooting tournament in full swing and one of the best bench shows that has ever been seen in the middle west, the crowd that has attended the show has, in spite of the weather which for the first two nights has been several degrees below zero, been a record breaker. Monday night there were nearly 2,000 persons present and tonight the number has been more than equaled. Several new exhibits arrived today and were in place when the doors were thrown open this afternoon.

The automobile men are one and all cursing the railroads that held them up for a 30-hour trip from Chicago to Detroit in a special express train. The show will come to an end Saturday night and there is no doubt of its success. Saturday night there will be one of those quiet affairs for which the local automobile men are famous. They will entertain the visitors at Lakeside, a place 16 miles from Detroit, where they will not disturb the residents of the city.

## GOOD SUM FOR ROAD INQUIRY

The department of agriculture appropriation bill, which has just passed the national house of representatives, carries an appropriation of \$35,000 to enable the secretary of agriculture to make inquiries in regard to the system of road management throughout the United States; to make investigations in regard to the best methods of road making, and other public road inquiries.

## ELECTION OF A. A. A. OFFICERS

The annual election of officers of the American Automobile Association was held last Thursday afternoon and resulted as follows: President, Harlan W. Whipple, Automobile Club of America; first vice-president, John Farson, Chicago Automobile Club; second vice-president, Judge W. H. Hotchkiss, Buffalo Automobile Club; third vice-president, Milbank Johnson, Automobile Club of Southern California; treasurer, George Farrington, Automobile Club of New Jersey; secretary, C. H. Gillette, Automobile Club of America; directors, Dr. Julian A. Chase, Rhode Island Automobile Club; A. R. Farrington, Long Island Automobile Club; Samuel H. Valentine, Automobile Club of America; Windsor T. White, Cleveland Automobile Club; Barclay H. Warburton, Automobile Club of Philadelphia; Dr.

W. E. Milbank, Albany Automobile Club; Eliot C. Lee, Massachusetts Automobile Club.

The Capitol Automobile Co., of Indianapolis, Ind., has purchased the business of the Automobile Storage & Repair Co. The Capitol company has just been organized and the officers are: President, D. B. Sullivan; vice-president, Charles Newby; treasurer, Walter A. Nordyke; secretary, Harlan S. Ratliff. The storage and repair department will be in charge of Charles Newby.

driven with great care in the towns and populated sections of the country, could be driven without danger of any kind at a speed of 37 miles per hour, on level roads. If a smaller limit is placed upon automobiles I believe it would result in a grave blow to the trade.

"I also think that there ought to be exceptions and that drivers of ability, known for their coolness, who are absolutely competent, should be permitted to drive as fast as they please. I hope we do not kill the steam vehi-

ment, and Chicago has been brought before the eyes of the country as a center of interest in automobiling in a way which demonstrates that New York will have to make a strong maintain its leadership."

#### QUELTER CUSTOMS REGULATIONS

According to the French custom house regulations broken parts of French automobiles are subject to duty. This regulation is causing such annoyance to makers and agents for



GENERAL VIEW OF THE DETROIT SHOW

#### SERPOLLET BELIEVES IN STEAM

Leon Serpollet, the French steam automobile manufacturer, when asked to express an opinion regarding the work of the French parliamentary committee, said: "It is stupid to think, as some people do, that this committee's work will have no results. Its work is by no means slow, although it has been issuing reports for several months. It is rather praiseworthy to notice that the members are taking ample time in making thorough examinations and tests and getting facts from all sides. I believe the outcome will be one of betterment. Concerning steam automobiles in France, I should judge that there are about 850 pleasure vehicles and about 80 commercial cars. Most of them use ordinary gasoline as fuel, and some have motors which develop as great power as is found on the larger gasoline cars.

My long experience with motor cars and my observation convinces me that a good vehicle,

etc; we cannot tell what service it may be able to render. It is necessary, because it exists. Let us continue to push it, to improve it, so that if we need it, we will not have to go away from home to get it."

#### PRaise FOR CHICAGO SHOW

"The Chicago show has been a most gratifying success," said John Farson, president of the Chicago Automobile Club, Saturday night. "It was an exposition that its promoters and managers can refer to with great pride. Too much credit cannot be given to Mr. Miles for his excellent taste and the energetic way in which he carried out his ideas. He made the artistic feature of the exhibit a thorough success. The decorations merited all the favorable comment they received. Society was welcomed, and it accepted the welcome and made its presence graciously evident. The show has given a great impetus to the good roads move-

ment, and Chicago has been brought before the eyes of the country as a center of interest in automobiling in a way which demonstrates that New York will have to make a strong maintain its leadership."

French cars abroad that the French automobile board of trade has decided to take up the matter with the proper authorities to have the regulation changed. Another question that will be taken up is that relative to the return of French cars from foreign countries. At present the majority of the contracts between French manufacturers and their agents abroad stipulate that unsold new cars may be returned at the close of the season. The custom house regulations provide that full duty be levied on these returned cars, although they were never used. On the other hand, if the same car would have been but slightly used and is returned over the road no duty is levied.

Interest in motor boat matters and racing craft especially is increasing so rapidly in Germany that a special motor boat section will be added to the German Automobile Club in the near future.



## PLAN COMPOSITE RACER

### Tradesmen Said To Be Preparing To Build Speed Car Representative of the Whole Industry

New York, Feb. 14.—According to a gentleman high in trade councils there has been considerable serious talk since the Ormond tournament among a coterie of prominent American makers of forming a syndicate to build a representative American speed machine to go for the records on Ormond beach and endeavor to place the speed crown on the head of Uncle Sam.

The value of record breaking and holding in the establishment of material automobile building prestige is now frankly acknowledged. American makers are busy, though, turning out stock cars for road use, and in consequence the building of a great racing car by any one concern would mean not only a heavy burden of expense, but also great factory inconveniences. National pride and the establishment of American prestige in speed machine building are the patriotic motives behind the movement which only needs a leader to secure volunteers for its accomplishment.

The universal success that has been attained by American makers, whenever they have turned their attention to racing car designing and building is instanced by way of encouragement to the project. In this connection the following is cited.

Winton Bullet—World's track records from 1 to 15 miles, and world's mile competition record, 43 seconds.

Winton Bull Pup—World's track records for machines under 1,800 pounds, from 1 to 10 miles.

Packard Gray Wolf—World's straightaway mile record for machines under 1,800 pounds, 46.2.5 seconds.

Stevens Duryea—World's straightaway mile record for machines under 1,200 pounds, 57.1.5 seconds.

Stanley—World's straightaway mile record for steam machines, 55.2.5 seconds.

Huker White Mouse—World's straightaway mile record for electric machines, 1:00.5.5.

Cannon—World's track records, from 1 to 5 miles for steam machines.

White—World's track records, from 6 to 10 miles, for steam machines.

Baker Torpedo—World's straightaway kilometer record for electric machines, 36.1.5 seconds.

Ford "999"—Former world's mile straightaway record, 39.2.5 seconds.

Locomobile—Former mile straightaway record for steam machines, 1:01.

Oldsmobile—Former straightaway mile record for gasoline machines, under 1,200 pounds, 1:06.2.5.

Altogether an incomparable all around string of world's records in favor of American automobile speed creations, with hardly a failure to secure world's records when any special attempt has been made by an American maker to build a machine to go fast.

## OHIO LAW AGREED UPON

Cleveland, O., Feb. 15.—With some amendments, the automobile bill introduced by Representative Bassett, of Toledo, and outlined in a recent issue of Motor Age, has been unanimously approved by the turpentine committee

and will doubtless become a law in Ohio, since practically all opposition has been withdrawn.

Representative Chisholm, of Cleveland, who is at the head of an automobile concern in this city, and who first opposed the bill and stood out for the New York law, has agreed to the measure in its amended form. The amendments secured by the action of Representative Chisholm were backed by delegations of automobilists from Cleveland, Toledo, Columbus and other cities, have practically removed from the Bassett bill all the objectionable features embodied in it at first, and in view of the strength shown by the farmer legislators who were determined to pass a stringent measure, the automobile enthusiasts are well pleased with the settlement.

The bill now provides that in cities and villages, local authorities cannot compel automobile drivers to run at a lower rate of speed than 8 miles per hour in the business and closely built portions, and 15 miles per hour in the suburbs. On country roads motorists will be permitted to run 20 miles per hour and county commissioners and township trustees cannot provide for a lower rate of speed, but may allow a higher rate. Chauffeurs will be benefited by this state law and will not be obliged to keep posted on all the different local regulations now in effect, and which frequently get them into trouble and the police court.

The bill further provides that, upon signal from the driver of a passing horse, the chauffeur must stop his machine. If the horse is restive, the automobile engine itself must be stopped upon second signal from the driver of the horse. The penalty for violation of the law will be a fine from \$5 to \$50. The original bill contained an imprisonment penalty, but this was stricken out, and violators of the law will not be placed in duress except for failure to pay their fine.

Last Tuesday Representative Jones, of Delaware, introduced a bill making it a misdemeanor to operate automobiles outside of city limits. The bill is generally regarded as a joke, but Jones insists that it must be taken at its face value. The representatives will be "loaded" for Jones and when his bill comes up for second reading, some of the amendments will provide that threshing machines, corn huskers and traction engines cannot be operated outside of city limits and that all horses traveling the highways must have their eyes blindfolded and ears stuffed with pink cotton.

## PROBLEM EASILY SOLVED

Since there is no early prospect of connecting High Point, the great furniture manufacturing center of North Carolina, and Winston-Salem, in the same state, by electric railroad, there seems to be a probability of an automobile line between the two places. In fact, the plan is already being seriously discussed. Discussing the proposed line with a Motor Age representative a resident of High Point said: "With good roads and an outlay of about \$15,000 it is thought a first-class line could be inaugurated—one which would pay. Vehicles carrying from fifteen to eighteen people would be installed, and the schedule arranged so as to accommodate the travel. By the proposed automobile route it is only 18 miles, whereas by rail it is 40 miles, and with an automobile line there would be no waiting for hours on trains and in making connections.

## GET A G. B. TAG OF A. C. A.

### All Cars Taken To Germany for the International Cup Race Must Be Labeled—Racing Cossip

New York, Feb. 15.—The German government has decided that every car which goes to the Gordon Bennett race, domestic as well as foreign, must carry a sign with the inscription G. B. and a running number. Any car that is not provided with such a sign will not be permitted to cross the German boundaries. A notice to this effect has been received by the A. C. A. from the German Automobile Club. Secretary Butler accordingly has notified the members that it will be to the advantage of those intending to tour to Homberg for the race to notify him at once. The notification of the German club is signed by the general secretary and is as follows:

At the instigation of our government it has been decided that every car which comes to the Gordon Bennett race, domestic as well as foreign, has to carry a sign with the inscription G. B. and a running number.

The German Automobile Club has the designs at cost, and we would kindly request you to notify us whether you would undertake the sale for America, and to notify us at the same time how many you will probably need for your country.

We call your attention to the fact that any car which is not provided with such a sign is not permitted to cross the German boundaries. We would be very much obliged to you if you would kindly take this matter to hand, and we would then publish a notice to the effect in the papers of your country.

As we have to at once order the above mentioned signs we would be obliged if you would kindly answer our letter by cable.

Louis P. Moores, designer of the Peerless international cup racers, has been interviewed about them and is quoted as saying that they are built on the lines of a yacht, the question of wind resistance having been carefully considered by him. He is reported to have denied that while the Harlan W. Whipple car built at the Scott Iron Works at Baltimore is practically a Peerless car it will be substituted for those being constructed at the Cleveland factory. The engines of his cars will, he said, develop 500 revolutions per minute. The engines, he said, are of the four cylinder vertical type, and there will be four speeds, with direct drive on high speed. The only difference in the three cars are in the size of their gears. All will be ready for demonstration before the end of March. Should occasion arise any two or all three will be placed at the disposal of the racing committee of the Automobile Club of America.

It is to be noted that Mr. Whipple is a Mercedes enthusiast and has hitherto been quoted as saying that his new car possesses the leading characteristics of the Gordon Bennett cup winner. It is said that Mr. Whipple will try out his new racer on the occasion of the international team trials at Ormond in April.

There has been some discussion here of the suggestion made at Ormond and in fact ever since last season's racing circuit closed of the desirability of a change in the present system of classification. At the conference of racing men held several weeks ago at the A. C. A. at which Chairman Pardington, W. C. Vanderbilt, Jr., O. W. Bright and other prominent racing lights were present, it seemed to be pretty well agreed that classification by weight

was the most practicable system, but a change in the weights adopted as standards here to those in vogue in France was favored to secure international uniformity.

A bore and stroke measurement of the cylinders for purposes of classification has recently been suggested.

Chairman Farthington is quoted as follows as opposing this plan: "I do not believe that all know the exact bore and stroke, and with a large entry list a board of engineers would have a solid week or more of work to classify the cars. As far as I can see, it will be necessary to continue to classify by weight of the car, and perhaps by performance after a time. The maker will then find it to his credit to crowd all the horsepower possible with the weight of his car."

F. A. La Roche is also quoted in opposition: "I cannot see how classification can be other than by weight of the machines, as at present. It seems to be impossible for some to learn the actual bore and stroke of their machines, and it would be necessary to make an examination to determine the actual figures, for I know of instances where the bore and stroke have been falsified, perhaps unintentionally, but falsified nevertheless."

#### NATIONAL DEALERS ORGANIZE

Chicago, Feb. 16.—A number of the retail dealers in automobiles assembled last Thursday at the call of S. A. Elston, of Indianapolis, Ind., and formed an organization to be known as the National Association of Retail Automobile Dealers. Over 300 firms were represented either in person or by proxy, and the interest shown augured well for the future of the association. L. J. Ollier, manager of the Cadillac Co. of Illinois, was elected president. No specific action was taken at the meeting, but a meeting will be called in the near future, at which a constitution and by-laws will be adopted and plans discussed. There are many evils in the trade which can be remedied by the organization, and the individual dealers as well as the local associations in the cities have signified their intention of joining the national body.

W. H. Eckstein, formerly manager of the Sandusky Automobile Co., at Sandusky, O., and C. C. Meade, formerly with A. G. Spalding & Bros., have become associated with the Cadillac Co. of Illinois, at 1312 Michigan avenue.

A number of the zealous demonstrators who drove their cars a trifle faster than allowed by law during show week are reaping the reward this week in the receipt of various and sundry calls to appear before the justice courts and explain why they did it.

#### GOVERNMENT OWNS AUTOMOBILES

Inquiries recently made by the house of representatives regarding the number of vehicles of all kinds maintained at government expense at Washington have disclosed the fact that a number of automobiles are owned by the government. One is owned by the department of commerce and labor and is used by the bureau of standards, a branch of that department, in transporting mail. It is a Waverly electric. An Oldsmobile is used by the assessor of the District of Columbia, while the library of congress has a heavy electric vehicle which is used in hauling books.

## ENGLAND'S NOVELTIES

### Big Automobile Show Opens in Crystal Palace—Many Improvements in Motor Construction

The automobile show at the Crystal palace, London, England, opened Friday, February 12, under the auspices of the Society of Motor Manufacturers and Traders. It is claimed that this is the largest show of its kind ever held. It includes automobiles and motors of every description, nearly 1,000 vehicles being exhibited, and about 300 firms represented. The countries in which the exhibit goods are made are England, America, Germany, Switzerland, France, Italy, Belgium and Holland.

Among the novelties that attract considerable attention are the Hutton and Crossley automobiles. The Hutton car differs in almost every respect from accepted practice, and the Crossley car also has several new points. The carburetor of the Crossley, it is reported, enables the automobile to be run as slow as 80 turns a minute. The motor is 22-horsepower.

The Napier exhibit consists of six cars. Three of these are 15-horsepower carriages, a Napier silent brougham, a parallel-sided tonneau with canopy, and a car fitted with a flat-sided body with Cape cart hood. There are two six-cylinder 18-horsepower cars, one being a chassis only, and the sixth car is a 24-horsepower Pullman, seating six persons. This last car is particularly suited for a station omnibus or for a shooting break.

The Germain Co. shows three cars with some novel features. The cylinders are bored out of solid steel with brass water jackets; there is a variable lift of the inlet valve, which allows the motor to run at less than 100 revolutions a minute without altering the carburation.

The special feature of the Darracq exhibit is the patent pressed steel frame stamped from one piece, forming a bed plate for the engine and gear box, bearing the carriage body 6 inches nearer the ground and eliminating any angularity in the cardan shaft.

The leading feature of the White exhibit is the long distance touring car, which it is claimed will run for 250 miles on one filling of fuel and water.

#### EXPECTS TO ECLIPSE ORMOND

The automobiles of Tidewater Virginia, have gone to work with might and main and will make a strenuous effort to arrange for a big racing tournament on Virginia beach. A meeting was held at the Monticello hotel, Norfolk, last Friday and an organization was formed which will be known as the Virginia East Coast Automobile Association. The meeting was attended by the majority of the owners of automobiles of Norfolk and Portsmouth, representatives of the transportation lines and others interested in the project. W. S. Royster was elected president, Dr. W. J. Adams vice president and J. Roy Collins secretary-treasurer of the organization. The executive committee consists of three officers together with Dr. Lomax Gwathmey and H. H. Trice.

The principal promoter of the Virginia beach course is Lee Strauss, of New York, and in speaking of its advantages he said:

"My expectations are that if the races are held on Virginia beach all previous automo-

bile records made in this country will be eclipsed. Here we have a beach 200 feet wide, or twice as wide as the one at Ormond. With such a beach, double the width of Ormond, we will be able to race ten cars abreast, something which has never before been attempted on the coasts of this continent. The beach here is 80 miles long. That will permit of establishing a 50-mile course, over which it will be easily possible to cut down the record of 45 minutes, made at Ormond, to 35 minutes. At Ormond beach last month William K. Vanderbilt made a flying mile in 39 seconds. This beach is so far superior to Ormond that this record may be smashed.

"James L. Breese, of New York, was in this section some weeks ago with his touring car. He made a 40-mile run down the coast from the Princess Anne hotel in 40 minutes. With such a record made with a touring car there is no telling what is possible with a big racer. I am very enthusiastic about the beach here, and I think that practical tests, such as we are going to give it, will establish the fact that there is none greater in the world. The Dourdan, in France, was considered the fastest course in the world until Ormond succeeded it. Your beach here will prove easily superior to Ormond."

One of the features of the course is that there is a telegraph line already established the entire length. The line is maintained by the government, and a permit can be secured to tap it for the purpose of operating the Morse timing apparatus.

It is proposed to have the first race April 12, after which there will be a series of races. F. A. LaRoche, of New York, is expected to visit the beach and test it with a heavy car.

#### GOLDEN GATE MOTORING

San Francisco, Cal., Feb. 10.—The Automobile Club of California is considering a meet to be held in this city next May. The meet last year was a great success for the first attempt, Barney Oldfield, of course, being the chief attraction, but it was easily seen that the other events would not have held the public a second time. In the coming event the officers of the club will have to supply more than one man of the caliber of Oldfield if they expect the gate receipts to be a success. Another feature that should and will receive attention this year is the racing of touring cars. The two special events on the last day, the contest of the Winton cars and the Autocars, brought out more enthusiasm from the visiting public than any other events besides those in which Oldfield appeared.

A remarkable trip was made by a Cadillac recently, owned by Dr. A. K. Harshall. The doctor left on an extended tour through the southern part of the state. During the 7 weeks he was away the Cadillac was driven 2,900 miles, and it is claimed that the doctor did not spend one cent for repairs.

Ex-Governor James H. Budd is just home from France, where he spent a year, most of the time in Paris. He brought with him a big Mors machine. Mr. Budd also brought a French chauffeur across the water with him.

#### ISLANDS ARE SMALL BUYERS

During the last six months of 1903 automobiles to the value of \$3,700 were shipped to Hawaii. Porto Rico imported \$3,061 worth of automobiles from this country in 1903, while the Philippines imported \$3,932 worth during the same period.



## MANY BELGIAN MAKERS

### Little Kingdom Is Rapidly Becoming A Very Important Factor In the Automobile Industry

Brussels, Jan. 31.—Surrounded by the elite of the Belgian aristocracy, by almost all of the principal manufacturers and dealers of the country, and even a few from France, the minister of industry and work, and the mayor of Brussels, officially opened the third annual Belgium automobile show last week. The immense hall of the Parc du Cinquantenaire, although 25 per cent greater than the Grand Palais of Paris, seemed too small to accommodate the immense throng. This nation, though small in size, is rapidly becoming one of the principal producers of automobiles in the world, and in their quality is such as to make them in many instances the equal of the cars made in France and Germany.

Two years ago there were eighty-two exhibitors at the first show, while last year saw the number almost double, 148. This year, however, all expectations were surpassed and nearly 250 exhibitors had to be provided for, which was a difficult matter.

From a decorative standpoint each exhibitor tried to do better than the other, and consequently there are a great many stands that are little less than miniature marvels in the art of decoration, and surpass anything at the salon de Paris. The foreign representation at the show is imposing. Firms like Clement-Bayard, Decanville, Rochet-Schneider, Richard-Brasier, Prosper Lambert, Darracq, Panhard & Levasseur, Delahaye, Berliet, Renault, Henriot, from France; Neue Automobil Gesellschaft, Chillingworth, Pipe, Teteren Gesellschaft and many from other countries have beautiful displays.

The de Dion-Bouton exhibit is one of the most attractive, and has not fewer than eighteen cars on display. Among them are a 20-horsepower truck, an electric 12-horsepower landaulet and a 12-horsepower gasoline tennie with side entrance of special design. The Fabrique Nationale shows twenty-five motor cycles. The Ateliers Germain shows a heavy truck of 11,000 pounds capacity and a number of touring cars; also a 15-horsepower motor boat, which attracts considerable comment. The Pipe company has ten cars and naturally has one of the most popular exhibits, owing to the fact that this company will represent Belgium in the Gordon Bennett race. The Metallurgique shows a line of touring cars with motors from 12 to 24 horsepower.

Graceful looking limousines are shown by the Ateliers Vivinuis, while the cars of the Automobiles Belgica are not overlooked by the visitor. The Automotor Mfg. Co., the former Deschamps firm, has a large and interesting exhibit. The special motor-cycle section presents exhibits of machines from the Red Star, the Sarelens, the Linen, the Royal Star, the Adler, the Antoine, the Minerva and others. Parts and accessories are shown by half of the exhibitors, while every make of tire can be found at the show.

In general the improvements are about the same as those found with the French cars last December. There are no particular Belgian features, but rather a large number of copied and improved ideas.

There are 121 automobiles on exhibition. Of this number there are only two electric ve-

hicles, five steam vehicles and four trucks; all the rest are touring cars belonging to the voiture, the voiture legere, and the voiturette classes. The first and last named are the most numerous. There are also thirty-eight chassis, 111 motor bicycles, seven motor boats, eighty-five detached motors, sixty-one bicycles, four automobile bodies and three demonstrating gears. Last year there were only seventy-eight cars on exhibition.

King Leopold visited the exhibition, accompanied by a large suite, and many prominent people belonging to all branches of the industry. All the big manufacturers were present, and the king had a few words of conversation for each. "I never had a puncture," said the monarch to a tire maker who was explaining to him all about the improvements for this season. Upon request of the king one of the Pipe cars, which is to represent Belgium in the big race, will be sent to him for a personal inspection.

All the ministers have visited the show on several occasions and the minister of public works made a special inspection of the exhibits, arriving unexpectedly one morning at 9 o'clock, when the stands were still in their night attire.

It is more than likely that the many visits of the officials and the increasing interest and even protection given the industry by the king, will result in the changing of the present drastic regulations, which in many places allows a speed of only a trifle over 3 miles per hour.

The Clement-Bayard exhibit was awarded the first prize for elegant decoration, while the second prize went to the Fabrique Nationale d'Armes de Guerre, of Herstal. This concern was awarded three first prizes in the competition for elegant chassis, bodies, limousines with side entrances and limousines with rear entrances. The Olds Motor Works were awarded third prize in the competition for delivery cars.

### CENTURY COMPANY A BANKRUPT

Syracuse, N. Y., Feb. 15.—The Century Motor Vehicle Co., which has been financially embarrassed since last July, has been forced into bankruptcy. A petition in involuntary bankruptcy was filed against it in the United States court at Utica, Saturday, following the filing of a judgment here by the American Ball Bearing Co., of Cleveland, O., in the sum of \$4,085.19. There are 158 creditors whose claims are principally for machine parts. The total liabilities amount to \$70,000, of which about \$40,000 is in open accounts and the balance is in indorsed paper. The assets are estimated at between \$50,000 and \$60,000. The latter figures are the invoice prices on the machinery, patterns, tools and parts, which comprise the assets. The largest creditors are: Manning, Maxwell & Moore, New York; J. H. Williams & Co., Brooklyn; Fellows Gearshaper Co., Springfield, Vt.; the Crucible Steel Co. of America.

The concern was organized 4 years ago and has been in the hands of creditors since last July, when about 200 employees were laid off and the manufacture of automobiles ceased. First an electric, then a steam and finally a gasoline machine was manufactured. The stockholders are all Syracuse men. The Century not only had a good reputation but one well deserved, being of good design, with ample power.

## BUFFALO'S TWO SCHOOLS

### Business College Puts the Automobile In Its Curriculum—C. N. Pierce Makes Opening Address

Buffalo, N. Y., Feb. 15.—There should be little excuse for the automobile trade of Buffalo employing entirely ignorant help on automobiles this season. Last week particulars of a gasoline educational school which the Y. M. C. A. is to give were announced, and now Bryant & Stratton's school is running a course of instructions Monday, Wednesday and Friday evenings. The school opened Monday with an address by George N. Pierce. During his remarks Mr. Pierce said: "What manufacturers want is brains, and you cannot get from any man good brain work unless that man's brain has, first of all, been supplied with the power to enable him to do his work well. If a man comes to me and says: 'I have had such and such a course of training, along such and such lines,' I do not care what, provided he knows what he is talking about, and I have use for that kind of work in my factory, I want that man."

Mr. Pierce pointed to the automobile on the canvas by way of illustration. "That was studied out by a man who knew his business; he carried out the instructions of his employers. There ought to be an hundred men taking lessons on how to run these machines. If any one thinks he can jump into one and run it and take care of it without knowing anything about it, why, let him try it—only I would advise him first to get the machine insured. What is wanted to attend this school is a class of young men to learn not how to make a gas engine, but how to run it, all about the connections, etc., so that when you come into a factory you can tell them you have such and such knowledge that can be used, that will make of you a money-maker for the person who employs you."

Following Mr. Pierce's address a lecture on gas engines, their use and development in this and other countries, was delivered by J. H. Massie. The course of instruction during the next few weeks will be as follows:

**Definitions**—The gas engine defined.  
**History**—Period of invention and application; description of early types, laying stress on those abandoned for good reasons for abandonment.  
**Theory**—Combustion of gases; laws of gases; gas engine cycles, including the Beau de Rochas, Clerk and Diesel; indicator diagram and their relation to the various cycles; the cylinder problem; compression and its uses; ignition; effect of jacking; efficiency.  
**Practice**—Classification of gas engines; fuel; compression in use; ports and valves; valve setting; jacking; carburetors; fly wheels; governors; types of ignition; power transmission; piping and accessories; starters; foundations.  
**Design and drafting**—Distribution of stresses; strength of materials of construction; power; speed; proportions of parts; tables and formulae; mechanical drafting and design of an actual engine.

**Construction**—Patterns and castings; material of construction; fits and gaskets; cam setting; babbitting; lining up.

**Operation**—Starting; running; lubrication; ordinary troubles of gas engines and how to remedy them; testing.

The Buffalo newspapers up to the time of the endurance run last fall had practically given the automobile the cold shoulder, but since that time they have been giving the industry ample space; in fact, one of the papers has been running an automobile department daily, and the Sunday before the Buffalo

show all will issue special automobile editions. The Centaur Motor Co. the W. C. Jaynes Automobile Co. and J. A. Cramer, who are all putting up expensive new brick garages, are disappointed at the slowness in which the buildings are going up. Zero weather has been the regular order in Buffalo for a long time, and masonry is not at a standstill under these conditions. It will doubtless be at least the first of April before any of these garages will be tenable. The Buffalo Automobile Club will occupy the second floor of the Centaur Motor Co.'s building as a club house, and it is expected that the profits of the Buffalo show will be ample to furnish the club rooms luxuriously.

The Columbia Motor Vehicle Co., one of the Buffalo concerns formed during the week of the New York automobile show, on account of the name being similar to that of a manufacturing concern, will hereafter be known as the Buffalo Motor Vehicle Co., and will occupy a part of the Bosche building, at 918 Main street.

### BOSTON'S IDEAL GARAGE

Boston, Feb. 13.—Another sign of the onward march of the automobile was shown here today when it was officially announced that A. R. Bangs had secured control of a large building in the heart of the carriage district, which he will hereafter devote to garage purposes. The building was formerly one of the most aristocratic of Back Bay stables, being situated in the fashionable quarter on Brimmer street. The building is large and admirably suited for the purpose. The main floor will contain office, salesroom, repair shop and room sufficient to store at least 100 automobiles. An elevator permits the carrying of vehicles to the upper stories. Associated with Mr. Bangs are Dudley Marks, formerly with the Peerless company, and Philip T. French, who has been connected with the Boston branch of the Electric Vehicle Co. One of the features of the new garage will be that four tenements, included under the lease, in the upper story of the building, will be occupied by employees of the establishment, so that men familiar with the place and its work will never be far away. Another feature is that the garage will be run on the co-operative plan to some extent.

It is at this time evident that the foreign contingent at the Boston show will be fully as important as that at the New York exhibit. The number of foreign exhibitors has been increased during the week, and this section will outclass that held at Chicago during the past week. Mr. Thomas, who accompanied Mr. Glidden on his tour to the Arctic circle last summer, is now en route with a fine display of English cars and will be present on each day of the show. The demonstration of the machines on the streets near the buildings will make a show in itself. The show committee will during the week hold an important meeting at which it will determine matters relative to the reception and entertainment of out-of-town exhibitors.

The Lewis & Matthews Co. has received its first shipment of Deauville cars.

Some changes have been made in the garage of Reed & Underhill on Stanhope street during the past month. The wall between the front and rear room has been removed, thereby giving additional storage room, while a somewhat commodious office has been constructed near the front entrance to the building.

## MECHANICAL STUDENTS

### Young Men of Millions Working In the Columbia Shop to Learn Automobile Business

Hartford, Conn., Feb. 15.—Some of millionaires and men of great wealth in their own right are employed in the Laurel street factory of the Electric Vehicle Co., where they are picking up information concerning machinery and especially dealing with automobiles. They are doing this to get a practical working knowledge of the mechanism which drives automobiles over the country and to make themselves independent of the professional automobile drivers. The first real work that many young men have engaged in is at the company's factory and the fellow workmen, less fortunate in their fortune assets, are finding these fellows first class good fellows who live much the same sort of a life.

In purchasing a car a man naturally wishes to know the inner working of the mechanism and to do this it is necessary to spend some time with the machine, to grow up with it as it were. This is what the force of young men employed by the Electric Vehicle Co. is now doing. They are put in the machine shop first where the work of grinding the engine cylinders and assembling the motors is in progress. They next move with the completed engine to the assembling room, where the trimmings are added to the motors. From here they go to the testing shed where the motors are hooked up and where they run continuously for three days. Following the stage of the automobile development they go to the assembling job, where the motors are hung to the frame, and next they are sent on the road with the cars, there to experience and correct all the ills to which gas engines are heir and to study the varying flights of motor eccentricities. In this way the company is providing a liberal education along automobile lines to a score of clever young men, many of them recently out of college.

L. P. Strong, a Yale student, is now undergoing this experience, and M. A. Storrs is another student. Both young men are of very wealthy parents and possessed of money in their own right which would relieve them of all responsibility in life. Dressed in blue flannel army shirts and wearing overalls like the less fortunate men who work alongside them, Strong and Storrs are working out the automobile problem to their own satisfaction and obtaining a thoroughly practical working knowledge of the Columbia car. The men about them find them first class fellows, ready to lend a hand and willing to let the grease grind itself into their pores without hope of its early disappearance. The same rule of early morning reporting for work follows in the case of the man who works for the pay envelope alone and his next neighbor, who is actuated by a desire for study of mechanics.

The report that E. C. Bald was at the factory of the Electric Vehicle Co. familiarizing himself with the Columbia product seems a bit previous, since he has not yet shown up and those of his friends of bicycle days are of the belief that he will not, since the experience in the factory, so necessary to good work with a big car built for racing, is said to be anything but to his liking. It is believed to be too arduous work for him. President Building

hired Bald and he wrote Superintendent Joyce that he would be on deck ready for work some day last week. Life hasn't turned up, nor has anything been heard of him. Bald has recently made his headquarters at the Marlboro in New York and evidently believes its hospitality too good to go too far away.

Work on the big Columbia cars is coming along fast, says Superintendent Joyce. Nearly all the parts for the first big lot of cars are out and the assembling has begun. The cars will go to the paint shop early in March, and perhaps before, and will be ready for delivery early in April. A protection for the cooler fan has been added which seeds all the air current against the motor. A flat belt has been substituted for the round one driving the fan.

While at the show in Chicago Bert Holcomb met Tom Feich, and the two talked over the chances of Holcomb's beating previous records across the country. Feich thinks Holcomb stands a splendid chance to do it. As soon as it became known that Holcomb was to attempt the trip he was besieged with offers from men who wanted to make the trip with him. None that he has looked over seem to give promise of standing up under a journey so arduous wearing.

Frederick H. Kenyon has been engaged by the Pope Mfg. Co. as general salesman in the Hartford district for the Pope products and will give much of his attention to the sale of Pope-Hartford cars.

### TWO OUTPUTS SOLD

Detroit, Mich., Feb. 11.—More producing factory space—that is what at least two Detroit manufacturers would give a good deal for just at present. Notwithstanding the big additions which have been made upon the plants of the Packard and the Cadillac companies, both are considering how to turn out more machines. Sales Manager Metzger, of the Cadillac company, has already contracted for the entire output of the company in 1904 and is turning down orders, so he stated to a Motor Age man yesterday. The factory is working night and day and may be unable to keep up with the present orders. The order numbers have passed the 3,000 mark and the factory is turning out thirty completed machines in 24 hours, 6 days and nights per week. The same condition prevails at the Packard plant. Since the first of February the big plant has been running night and day and at the present writing a trifle over 200 of the big cars are in process of construction. The output is disposed of and the factory will have to run double time to meet the orders at the specified time of delivery.

### A. C. A. BUSINESS CAR TEST

New York, Feb. 17.—The Automobile Club of America today announced that it will hold its commercial vehicle test in New York city April 4 to 9 inclusive. Instead of being run as a set test, as last year, the competition will comprise service in the actual work of the Adams and the Westcott express companies. Each car will be accompanied by a regular observer who will make accurate record of the per diem performance of the vehicle in all phases of the work rendered. The entrants will be divided into six classes according to dead weight carried, the classes ranging from 1,000 to 6,000 pounds, by 1,000-pound jumps. The details of the contest will be announced later.

# GOSSIP OF THE METROPOLITAN GARAGES



Despite continued cold weather the selling successes scored at the Madison Square garden show have been favored by a most encouraging aftermath of well sustained buying. The importers have been notably successful in following up their show exhibits with actual sales and advance orders for increasing shipments, the show cars and stock on hand having been disposed of to a very general extent.

A large delivery wagon for the National Cash Register Co., arrived at the Winton garage this week. The body was handsomely finished and set on a 1903 Winton chassis.

Nathaniel Huggins, of Pasadena, Cal., has ordered a Daimler of the model and power of the Henri Page record maker, now owned by B. M. Shanley, Jr., of Newark, N. J.

M. Charley, the Mercedes agent, sailed for Paris on Thursday, leaving rumors behind him of an American Mercedes company and a New York Mercedes club and garage to be formed later.

George H. Travis, sales manager of the Brooklyn Automobile Co., has put in practice in the New York garage of the company a novel and easy assuring method of demonstrating the Haynes-Apperson. On the second floor of the garage a Turkish parlor with encircling divans, cozy corners, easy chairs and reading table, has been installed for some months. In the center of this Mr. Travis has set up the aluminum finished chassis seen at the Haynes-Apperson booth at the New York show. The chassis has a mirror beneath it and a cluster of electric lights under a reflector above. The machinery is set in motion when desired by an electric motor and the customer, cushioned at his ease, after, perhaps, a day's round of wearisome shopping, has the working of the motor, clutch and pump demonstrated to his eyes and the Haynes-Apperson merits extolled into his naturally readily receptive ears.

Frank Eveland, manager of A. G. Spalding & Bros., agents for the Autocar for New York, New Jersey and Connecticut, says that the demand for these cars, which started at Madison Square garden with 127 sales, still continues. Mr. Eveland complains of doubled freight charges from the Ardmore factory and says hereafter he will drive all the cars over from Philadelphia to this city, thus assuring his customers of cars in perfect running order and saving a very considerable freight bill.

J. E. Demar, of the Baker Electric Vehicle Agency, is devoting much of his booming of the Bakers to bringing their economic advantages before physicians. He instances the experience of a physician on Sixty-fifth street, whose private car between One Hundred and Fifty-ninth street and Twelfth street and the two rivers. A record of mileage shows an

average of 26 miles a day at an average cost of 3 cents per mile for storage, charging and repairs for a light runabout. The physician in question, who formerly used a gasoline machine, and had to employ a chauffeur, is said to be enthusiastic over the economy and convenience of the electric runabout and declares that its lack of vibration means much in saving a surgeon's arm, necessarily employed in delicate operations.

The Duerr-Ward Co. expects this week an Acme car for demonstration from the Reading factory. Mr. Duerr has been at the Chicago show examining several of the new cars with a view to adding one or more of them to the company's line.

The Auto Import Co. is showing models of the Criterion cars, which are made specially for it in a French factory. They are of 10 horsepower and retail at \$2,750.

The upper Broadway automobile district, which extends from Forty-ninth to Sixtieth street, between Seventh and Ninth avenues, has already outstripped the necessarily restricted Thirty-eighth street district in numbers and is growing rapidly. Already concentrated in this section of the city, within a district half a mile square, are: The Winton Motor Carriage Co., Central Automobile Co., Studelaker Bros. Mfg. Co., Mobile Co. of America, R. F. Goodrich Co., Diamond Rubber Co., Duerr-Ward Co., Baker Motor Vehicle Agency, Auto Import Co., Pope Mfg. Co., and Auto Supply Co., on Broadway; White Sewing Machine Co., on Forty-ninth street; Alexander Fischer on Fiftieth street; Babcock, Atwood & Bowen and Woods Motor Vehicle Co., on Eighth avenue; Packard Motor Car Co. and A. P. Ranney on Fifty-ninth street; American Automobile Storage Co., on Sixtieth street, and the Broadway Automobile Exchange, Woodson & Drew, Consolidated Motor Co., the Victor Storage Co. and others on side streets east of Broadway. Already the project of an uptown luncheon club made up mainly, but not exclusively, of automobile tradesmen, is being agitated, with headquarters at the Cumberland, Wellington or Woodward hotels.

Ralph Pulitzer and M. M. Belding, Jr., have bought 1904 Peerless cars, having previously owned and driven the 1902 and 1903 models.

C. H. Tangeman, of Hollenden & Tangeman, importers of the F. I. A. T., expresses great confidence in the Italian team winning the Gordon Bennett cup. "The F. I. A. T. cars the Italians will drive," said he, "will be regular 60-horsepower stock models, which I believe to be the fastest cars in the world. I do not think cars over 60-horsepower are efficient for racing over roads with frequent turns. Even Mr. Vanderbilt's 90-horsepower

Mercedes could only beat the 60-horsepower Mercedes touring cars driven by Mr. Bowden and Mr. Stevens at Ormond less than a second in the mile."

Smith & Mabley, in a circular letter to the press, call attention to the fact that the concern has no connection whatever with the Charron, Girardot & Voigt Co., of America or of France, and has not had for several months.

The Long Island Automobile Club holds weekly lectures upon matters of interest to automobilists. Last week the subject was the storage battery, its construction and use as applied to automobiles. Alfred Mackay delivered the lecture.

## IMPORTS OVER A MILLION

Official figures show that between July 1, 1902, and September 30, 1903, European automobiles were imported into the United States to the value of \$1,262,711, or an average of \$2,985 for each of the 423 cars imported. France leads the list with 379 automobiles, valued at \$1,141,036, an average of a little over \$3,010 per car. The twenty-one imported English cars were valued at \$63,290, or an average of \$3,013. Germany has third place, with fourteen cars, valued at \$29,594, an average of \$2,114. The six imported Italian cars were valued at \$12,754, an average of \$2,125. Two Belgian cars were imported. Their value was \$3,127, or \$1,563 for each. An Austrian car, valued at \$3,177, was also imported, but an Irish car leads the list for highest price for a single machine, being valued at \$9,733. To be correct, the car in question is one of the racing monsters which took part in the Gordon Bennett race, where it was bought by Foxhall Keene. It is erroneously termed an Irish car, as it was simply shipped from Ireland direct to the United States.

During the same period automobile parts and accessories valued at \$63,583 were imported. The bulk came from France and Germany.

## FRISCO TRADE OPENS

San Francisco, Cal., Feb. 12.—E. P. Brinegar, president of the Pioneer Automobile Co., and Captain John F. McLain, manager of the Los Angeles branch of the Pioneer Automobile Co., returned last Wednesday from the New York show. Both returned much enthused over the automobile prospects for the coming season. After looking over the ground thoroughly at the show, and at a number of factories, they decided that they would not take on anything and have the same lines to offer an last season.

The fifth carload of Winton touring cars arrived last week and all have been delivered.

The four-cylinder Pope-Toledo arrived here last week and attracted immense interest at the National Automobile Co.'s garage. B. D. Merchant, who was one of the first in this city to purchase one of these cars, had his heart gladdened and his pocketbook lightened last week by the receipt of the car.

George H. Owen & Co., of San Jose, have placed an order with the Pioneer Automobile Co. for a dozen Oldsmobiles to be delivered as soon as possible. A carload of Cadillacs is expected shortly by Cuyler Lee, the local agent. The Antecar agency in this city, with Mr. Richwine manager, has changed its name to the West Coast Motor Car Co. Several out of town sales of Autocars have been made during the past week and the prospects for a lively season are good.

#### FRENCHMEN DOUBT RECORDS

The majority of the French papers, while not expressing in plain words their doubt as to the authenticity of W. K. Vanderbilt's mile record, are so surprised at the time that they await more details than the cablegrams they published before owing to the fact that world's record has been made in America. Some of the journals say there must have been some error in the transmission of figures, others claim the time keeping must have been somewhat defective. A few believe it is materially impossible to attain a speed of 39 seconds for a mile out of the car because it was never

able to show such time by several seconds on European roads. George Prade, in l'Auto, says:

"We stated yesterday that some of the times taken at Ormond left us dreaming. The 90 horsepower Mercedes is an excellent car and exceedingly fast. The telegraph has confirmed to us the officiality of the time, but I will say quite willingly that there is something apparently little expected. But, in succession, the telegraph has brought us some other times, which cannot but leave me sceptical. For instance, H. L. Bowden in a 60 horsepower Mercedes is reported to have covered 15 miles in 10:18. That is 618 seconds, which gives an average of :41 3-10 per mile. The mile in :41 3-10 gives an average of 87 miles, or 140 kilometers per hour. And this over 24 kilometers, and with a car which, in Europe, with the finest drivers, could not do 125 kilometers, or 77½ miles!"

"I will not surprise anybody by saying that the excellent machines which won the Gordon Bennett race, and which are yet 'touring cars,' could never attain 140 kilometers, nor one kilometer over 130 kilometers. Maybe Bowden used the 90-horsepower car, which then would have been extraordinary. However, yesterday in the same heat of the 5 miles, Stevens, also on a 60-horsepower car, riding against Vanderbilt on his 90 horsepower machine, covered the 5 miles in 3:39, which represents 219 seconds, or a mile in 43 seconds,

an average of 135 kilometers to the hour; which although a little less extraordinary, is nevertheless materially impossible. A comparison of the times of a defeated contestant would make it more sensible.

"Here is LaRoche, who on a 1903 Darracq covers the 5 miles in 4:01, which does not seem to be very much, but nevertheless represents an average of more than 120 kilometers per hour! Well, the Darracq has never passed the 120-kilometer average, except once, when Barras drove it over 1 kilometer, and with wim! shields.

"There must be, over there, a singular bonification of the carburization, which must apply upon the multiplication of the teeth of the pinions. Unless there is simply wind in the chronometers or else that the track is contracted through the cold of the winter. I cannot understand it."

Several manufacturers are reported to have laughed when shown the remarkable American performances. M. Gobron, of the well known Gobron-Brillie concern, has challenged Vanderbilt for a race over a distance of a mile or 1 kilometer, and the only conditions which he stipulates are that the road be accepted and measured by the Automobile Club of France and that the time be taken by official timekeepers of the same club.

There is a good deal of speculation regarding this challenge, which it is believed the young American will not accept.

## GORDON BENNETT CUP RACE NOTES

According to cable advice Rene du Kayff made an inspection of the circuit des Ardennes roads last Monday, which may result in the selection of this course for holding the French trial race, instead of the circuit de l'Argonne. As previously reported some parts of the latter circuit have been pronounced so dangerous and so narrow as to even scare some of the most daring professional drivers. Several have said that while it was possible to go over the course for inspection purposes without great risks, the chances for serious accidents in a race would be such as to make it almost a criminal offense to choose the circuit de l'Argonne. The Ardennes course would pass through the following localities: Flize, Houlzicourt, Poix, les Cretes de Poix, la Neuville-aux-Tourneaux, les Cletes de Neuville, Painsault, Saulces-Monelin, Novy, Rethel Saulx-lez-Rethel, Biermes, Meni-Ansell, Puvroux, Bourcq Vouziers, Bailly, Quatre-Champs, le Cheonne, Tannoy, Chemery, Chelery, Donchery, Domle-Menil and Flize. The distance of the circuit is 77½ miles.

After Remede Kayff, with the other two members of the French sports commission, had returned to Paris from an inspection of the road of the circuit de l'Argonne he said: "Each had a different car, with a motor of different power. My car was a Panhard 70-horsepower racer, while that of another member was but all ordinary 15-horsepower touring car. I was astonished when we made up our report, that each had the same views. The Argonne road is almost a duplicate of Taunus road, I venture to say that some parts of our circuit are more dangerous, and before any race can be run over it it will be absolutely necessary to remedy a number of sharp turns and narrow strips of road."

The three Opel cars entered for the German



trial race are really three German-made Darracq machines, inasmuch as the Opel company has bought the patent rights for Germany to manufacture the well known French cars.

The colors of the cars of the different nations competing in the race are: Red for America; white for Germany; green for Great Britain; yellow for Belgium; blue for France; black for Italy. Switzerland and Austria have not decided between violet, orange and purple.

A conference on next International cup race took place in the chamber of the Lords of Prussia a fortnight ago. Count de Schlieffen said the regulations for motorists were not sufficiently severe and that the dangers of road racing were so great they ought not to be held. M. de Schoenstedt, minister of justice, said the government would take all possible means to guarantee safety to the public.

Prince de Schoenmarch-Carolath said the greatest number of accidents were caused by reckless drivers. M. de Hannestein, minister of agriculture, took up the defense of the motorists. "It is not possible to forbid the use of our roads to automobiles," he said, "because they are becoming an important factor and because they have a great future in Germany. The government is trying to protect people as much as possible, but it cannot make drastic measures. As to the Gordon-Bennett race, all possible precautions will be taken, and I hope this race will result in glory for the German industry."

The Duc de Ratibor, president of the German automobile club, and a member of the chamber, said: "The Automobile Club of

Germany thanks the minister of agriculture for his kind said same words. The Gordon Bennett race will be arranged in such a way that the public will be fully protected. About the time of the start of the race, and until the end, the entire road will be so guarded that no person or vehicle will be able to cross, except officials and people who have business. All crossings will be barred by wire fences; all automobiles will be given special plates bearing the initials G. B. and a number. Reasonable motorists are not a menace to the public, but I am sorry to be compelled to recognize the fact that all have not these qualities and that there is a small number that have the 'speed craze.'

Count de Hoonbroecht said the public would be fully familiar with automobiles and that by enacting more severe laws it would only retard the familiarization of the public with the machines. Furthermore, he said it was very difficult to make speed regulations, because it would be entirely unjust to forbid a speed of 30 to 35 miles when roads are clear or when there is no possibility of danger to the public.

According to the statement of a member of the Belgian sports committee of the Automobile Club of Belgium the English trial race will be run on the Belgian circuit des Ardennes road, probably near the end of May.

Fifty rooms for Belgian visitors have been retained at Frankfurt for the Homburg week. On account of the trust formed by Homburg hotel keepers, members of the two touring parties now being arranged by the Automobile Club of France and l'Auto, of Paris, will probably boycott the hotels of that town. A letter of protest has been sent to the German Automobile Club, also to the mayor of Homburg.

# THE FIRST MOTOR BOAT SHOW

## America's Exclusive Marine Exhibit Being Held Nine Stories Above Earth in a New York Building—Complete Display of Power Boats, Marine Motors and Fittings for Launches

New York, Feb. 15.—The exhibit of launches, motors and appliances now open in the great hall at the top of the Maey building is the first of the kind in this country and as such is attracting interest. While by no means complete as a thorough representation of the launch industry, it is an encouraging step in the direction of a regular show that will appeal to yachtsmen just as the automobile show does to motorists.

The big hall is amply provided with freight elevators, but this new class of exhibits called for special measures and it was found necessary to remove one of the side windows and to hoist the larger launches from the street, nine stories below, by means of a temporary derrick on the roof.

The Truscott Boat Mfg. Co., of St. Joseph, Mich., has a very large and complete display of all classes of boats, including launches, fine row boats, lively boats, and canoes. Only open launches are shown, there being four different sizes. The Truscott four-cycle, four cylinder motor, 50-horsepower, is shown and also a working model of the Truscott two-cycle motor, with a section of the cylinder cut away to show the operations. This, of course, attracts the usual crowd, with some self-appointed expert in the center who explains exactly how a two-cycle motor does not operate.

The Isham Co., of Norwich, Conn., a new concern, shows three open launches, one of the whaleboat type, 30 feet by 6 feet 6 inches, a very powerful boat for salt water use. The company also builds what it calls the runabout launch in sizes of 22, 25, 30, 35 and 40 feet, sharp at both ends, one of the smallest size being shown. A 15-foot dinghy is shown, finished in mahogany. The Isham motor is made in various sizes and of both types, the four-cycle being shown in the 5-horsepower size, with heads cast solid, while the two-cycle is shown in the 2½-horsepower size. A number of models are also shown.

The Lozier Motor Co., of Plattsburgh, N. Y., shows a new model of launch called the Water Boy, an open cruising launch with speed stem and stern. The Lozier two-cycle motors are shown in several sizes.

The Clifton Motor Works and the Carlisle & Finch Co., of Cincinnati, have an interesting exhibit of marine motors, both two and four cycle, and electrical fittings for launches, including the latter's well known searchlight. This is made in sizes for small launches. The four-cycle Clifton motor is shown in the 16 and 8-horsepower sizes, two and four cylinders, compactly built machines with ample water jackets and a speed control which throws from the dynamo to the battery as the speed is reduced. A starting crank of ample length and generous proportions is a special feature of the motor. The two-cycle is shown separately on a marine base and also connected to a dynamo for electric lighting, giving current for 25 lamps.

The Mianus Motor Co., of Mianus, Conn., shows a powerful 25-foot launch, intended for open water, such as is in demand on Long Is-

land sound, and also its 4-horsepower two-cycle motor. The Fairfield Motor Co., of Bridgeport, Conn., has a good display of its motors, all two-cycle, in sizes ranging upward from ¾ to 1, 1½, 3 and 6-horsepower. These are all finished uniformly in blue.

The Western Launch & Engine Works, of Mishawaka, Ind., represented in New York by Newberry & Dunham, shows two open launches of 21 and 18 feet, fitted with the Western engine, and also separate motors on stands. At the same exhibit is represented the Pearson Boat Construction Co., of Duluth, Minn., with an open 25-foot launch, fitted with the White four-cycle motor. This same motor is shown separately in several sizes.

The Rockaway Motor Co., of Rockaway, Long Island, shows a good fishing boat of cheap construction, but very staunch, fitted for rough work on the sea. It is lapstrake, strongly built, and fitted with a 2-horsepower Mianus motor. For real service it is as good as any of the more costly makes of launch.

Palmer Bros., of Cos Cob, Conn., show two launches, one a plain flat bottomed fishing skiff or batteau, fitted with a motor of 1½ horsepower; the other an 18-foot launch of the torpedo type, with very pointed stern, intended for shoal water. There are also shown two row boats of 12 and 10 feet and two of the Palmer two-cycle motors.

The Cushman Motor Co., of Lincoln, Neb., shows two of its marine motors, the 7 and 4 horsepower, both two-cycle and apparently well built. The Phillips valveless high-speed engine, for steam or compressed air, is shown in the smallest size, 16-horsepower, weighing but 110 pounds.

A very handsome display is made by the Victor Metals Co., of East Braintree, Mass., maker of bronzes and special alloys, in particular the Victor non-corrosive silver. This is a handsome white metal, of great strength, used largely on yachts and launches. Fittings of all kinds, including propellers, cleats, etc., are shown. The Autogas battery is shown by William Roche, New York, also a special copper funnel with removable gauze stainer for motor cars and launches.

The United States Curtain Co., of Newark, N. J., shows an excellent device for curtains for launches and automobiles, the curtain being fast on the sides as well as at the top and completely excluding the wind. A curtain is shown of some transparent substance that serves the purpose of glass, but is at the same time sufficiently flexible to roll up when not needed.

The Dare airship is shown by a model about 12 feet long, an oval balloon supporting a framework, carrying air planes ingeniously arranged, the machine being driven by two propellers.

### ENGLISHMEN STILL IN DOUBT

Englishmen have for years been most consistent disbelievers of the correctness of times made in American sporting events, and even after the truth has been pounded into them in sport after sport the old doubt crops up in anything new. There has never been much

chance for doubt about the times made in the races for the America cup. The English bouts have been known to make a certain speed and have been thoroughly beaten by the American challengers, leaving absolutely no room for question. It took years to show that American bicycle times were correctly reported and it required a few beatings to show what speed Americans had. Only a short time back a lecturer before the Automobile Club of Great Britain and Ireland stated that he did not believe America had any really fast launches and that "until we have the pleasure of seeing an American competitor for the Harnsworth cup on this side it is doubtful whether we shall obtain any trustworthy data as to their speed." Morou AGZ makes no claim for the speed of American boats; on the contrary, there is some doubt as to the correctness of some of the reported times; it has also been shown that these have not been made in races, but in trials, and that at least some have been estimated times rather than absolutely known figures. This does not, however, change the situation; it would be more courteous for our friends across the pond to await the results of some race to "obtain trustworthy information." It is a perfectly safe proposition for a boy to stand on his own door steps and call the other boy names, but he would hesitate to go into the other boy's yard and say much. There will be ample opportunity before 1904 ends for Britisheers to follow American speed matters relating to power boats, and if the figures are not satisfactory we should be pleased to see Napier, Sciolependra, Durendal, or some other foreign speed proposition in competition on this side, which would at least settle the minds of the doubting Britisheers.

### FRENCH BOAT TESTS

It is reported that the French committee for automobile traffic has made a series of experiments in the Bois de Boulogne for the purpose of comparing the quickness with which horse vehicles and automobiles can be stopped. At the time of the trial the macadamized road was muddy, and it was to be expected that the hoofs of the horses would find a better hold than the rubber tires of the automobiles. The latter, however, showed themselves superior in this respect. Two vehicles with one horse each two with two horses each and one with a pony competed with an automobile of 6 and one of 40 horsepower. At a speed of 7½ miles per hour the horse vehicles could only be completely stopped at 30 feet; the two automobiles at 10 feet. At a speed of 10 miles per hour the one-horse vehicle stopped at 40 feet; the automobiles at 13½ feet and 16½ feet, respectively. As one of the horses was overworked, the automobiles made some further tests alone, resulting in stopping at 33 1-3 feet at a speed of 16 miles per hour and at 60 feet at 25 miles per hour.

### WANTS AMERICAN BOAT

An automobile boat is to be built in America for the German emperor. It will be built at the Herreshoff works and will be one of the lightest hull ever constructed. The order was received by Alexander Fischer from the Emperor's representative, and the reason given for placing the order in this country was that the best builders here are as far in advance of Europeans in their designs of models and construction as the Europeans are in the lead in the construction of motors.

## THE READERS' CLEARING HOUSE

### REDUCING MOTOR SPEED

West Liberty, Ia.—Editor *MOTOR AGE*—I have a high speed gasoline motor which runs at from 1,000 to 1,600 revolutions per minute. I wish to reduce its speed and still retain the same power, so that I can mount a planetary transmission gear on the motor shaft and drive direct on the high speed. The fly wheels are within the crank case. The transmission gear would add 50 pounds weight upon one end of the shaft and the starting device 25 pounds upon the other. If I give the engine a higher compression by putting a copper plate on the top of the piston, will the power be increased to allow the reduction in speed? Is there a better plan? What is a good liquid flux for brazing steel?—U. R. LANE.

Increasing the compression will, of course, somewhat increase the power of the motor. Whether or not it will sufficiently increase it to allow a great reduction in speed without loss of power is doubtful, for it is probable that the motor is already of fairly high compression. If the motor runs so fast that the transmission cannot be directly mounted upon its crank shaft and still furnish sufficient speed reduction on its low and reverse drive, the most readily accomplished plan would be to place the transmission gear on a chain driven counter shaft, there thus being a reduction of speed between the motor and the counter shaft and between the latter and the rear axle. For brazing steel either borax or boracic acid or one of the several prepared fluxes may be used to advantage. Probably one of the latter will be found best, as they do not leave so hard a scale as the straight borax.

### KEROSENE MOTORS

Ohio Falls, Ind.—Editor *MOTOR AGE*—I desire to study the question of kerosene motors for automobiles. Has *MOTOR AGE* at any time published detailed descriptions of the construction of such motors? There is no doubt in my mind that there is sufficient reason for the almost exclusive use of gasoline motors, especially in view of the fact that in large stationary motors kerosene is not much used; but I desire to learn. Why is oil not used and what are the requirements in construction for its use?—O. J. SCOTT.

Kerosene motors are not commonly used because, in the first place, it is difficult to vaporize kerosene; in the second place, the combustion is not so nearly perfect as with gasoline, and hence the cylinders become fouled more quickly; and in the third place, experiment has shown that the oil engine does not yield the same efficiency at the same cost of operation. *MOTOR AGE* has not published detailed descriptions of such engines, as those which have been constructed have been mainly for stationary or marine use. A general description of the Diesel oil engine was published several years ago.

### SMALL COMPOUND MOTORS

Kalamazoo, Mich.—Editor *MOTOR AGE*—I am much interested in the compound gasoline engine as applied to automobiles and would like to know why it is that despite the fact that engines of this type have been success-

fully applied to large cars, the makers do not attempt to adapt them to small runabouts, etc.—H. E. TILLARD.

The compound engine may be adapted to a small as well as to a large car, but in the case of the former it necessitates a more expensive construction than is practicable in building runabouts. The motor cannot be made of individual cylinders mounted on a suitable crank case, but all cylinders must be of one casting, the boring and machining of which is a rather expensive job to be undertaken in the production of a low cost car.

### ELECTRICITY OR GASOLINE

Corinth, Miss.—Editor *MOTOR AGE*—Where speed and great radius are not essential which is the more reliable, a gasoline or an electric carriage? What are the relative running costs? What per cent grade will the ordinary electric carriage climb with a normal load?—W. O. HENSON.

Either a good electric or a good gasoline car is reliable. The chief point for consideration in selecting between them is the character of the service required. If the car is to be used strictly for city work and is to be driven by persons who do not care to undertake to learn the more complex characteristics of a gasoline car, the electric is probably more suitable. If a wider range of usefulness is desired, the gasoline is better suited, for it can go anywhere that any wagon can go. The relative cost of operation of the two is difficult to ascertain, owing to lack of data obtained upon a like basis of calculation. Records of expense of gasoline cars have been taken in connection with a much more extensive service than that rendered by electric. It is probable that for exactly the same service, speed, etc., the total cost of operation and maintenance of the electric would be at least twice that of the gasoline car. A good electric ought to be able to climb at least a 15-per cent grade.

### HORSEPOWER CALCULATION

Hartford, Conn.—Editor *MOTOR AGE*—Noticing E. H. Baldwin's letter in *MOTOR AGE* of February 4, and also your reply, I wish to give my opinion regarding the horsepower of an engine. There are a good many points besides the bore and stroke which have to be properly proportioned in order to give the best results. When one wishes to get the horsepower he must ascertain if the following parts are properly proportioned to suit the bore and stroke: Size of inlet and exhaust valves; lift of inlet and exhaust valves; time of opening and closing of the inlet and exhaust valves; time when fully opened and fully closed; number of pounds tension on inlet and exhaust valve springs; what the engine compression is in pounds absolute; dimensions of the fly wheel.

Many more details of minor importance should also be taken into account when considering the horsepower, as, for example, degree of freedom of crank shaft bearings, lubrication, and, above all, the degree of freedom of the passage in the inlet and exhaust piping. Another very important point is the carburetor.

This must be properly designed and properly set to give a perfect mixture. To show that the man who designed the 5½ by 6-inch cylinder knew how to figure his power and that the claim made that it was from 10 to 14 horsepower was correct, I give the following formula:

$$I. H. P. = \frac{P \cdot L \cdot A \cdot N}{33000}$$

Where P equals mean effective pressure; L, length of stroke in feet; A, area of piston in square inches; N, number of explosions per minute. For the M. E. P. we may use Fredrick Grover's formula:

$$M. E. P. = 3 C - .01 C^2$$

in which C is the maximum pressure of compression by the gauge. Taking for C its value in the engine, we have:

$$M. E. P. = 2 \times 90 - .01 \times 90^2 = 99 \text{ pounds.}$$

To make doubly safe we will allow 9 pounds of this for uncorrected radiation losses, although Mr. Grover's formula is used as strictly empirical, thus:

$$P = 90 \text{ lbs; } L = .5; A = 21.65 \text{ R. P. M. } = 750; N = 375$$

Hence we have:

$$I. H. P. = \frac{90 \times .5 \times 21.65 \times 375}{33000} = 11.07$$

Taking R. P. M. as 1,000, we have:

$$I. H. P. = \frac{90 \times .5 \times 21.65 \times 500}{33000} = 14.76$$

These results have been borne out by actual brake tests. I have seen an engine of this bore and stroke give more than the above horsepower at the speeds assumed. I believe that if Mr. Baldwin will take all the points into consideration in the engine which gives 8 horsepower he will get approximately 8 horsepower after figuring out the formula as laid down above. I trust this information will be of benefit to other readers.—HABOLD L. FORK.

### FOUR-WHEEL MOTOR CYCLE

Athens, O.—Editor *MOTOR AGE*—I intend building a one-passenger automobile from two women's bicycles coupled together, with a 2-horsepower motor between them. I will use belt drive from a counter shaft. Will the slipping of the belt be sufficient to do away with the necessity of the differential gear? Will more than one speed gear be necessary? Will the 2-horsepower motor be large enough, and will the two bicycles have sufficient strength? The machine will not be put to very hard usage.—B. D. HEMPESTED.

The slippage of the belt does not affect the question of compensation of unequal rotation of the rear wheels so long as only one belt is used and both wheels are fastened to a live rear axle. If there were two belts from the motor, one running to each rear wheel, the latter being loose on a stationary axle, the slippage would provide the compensating movement desired, but in a power-planting way. The number of speed gears necessary depends entirely upon the class of work for which the machine is intended. If the work is light one speed should answer. The 2-horsepower motor will drive the machine but not at a very great speed. The two bicycles will be strong enough if extra heavy front forks are provided. Inasmuch as the machine, when completed, would be but a four-wheel motor cycle, a better plan entirely would be to build a regular motor tricycle. It would be lighter, more rigid and more efficient in every respect. The two bicycles could not be coupled rigidly without adding so much weight that the little motor would not be sufficient.

# MOTOR BOATS



## MOTOR BOATING IN ENGLAND

Marine motoring in this country is a sport of scarcely a year's growth, and the season of 1903 will always be remembered as seeing the introduction, for the first time in our waters, of motor launch racing on a regularly organized basis, and with recognized rules for measurement, rating and time allowance between various boats.

My first experience of high-speed launches made a great impression on me. It was at Dartmouth, in the summer of 1901, that by the courtesy of Simpson, Strickland & Co., I was enabled to make a trip upon their fast 30-foot launch. The engine was a Cross patent balanced four-crank quadruple of 140 indicated horsepower, running at 1,100 revolutions per minute. The boiler pressure was 375 pounds per square inch, and, although the hull was not an easily driven one, having been designed as an ordinary useful yacht's launch for carrying in davits, and not as a racing machine, the boat on several occasions attained a mean speed of 19 knots, the times being taken by well-known official representatives. This is certainly the highest speed ever reached by a boat of that length in English waters. The total machinery weight was 3,290 pounds, steam up being 25.5 pounds per indicated horsepower, and the job was extremely well finished, reminding one of a miniature torpedo boat engine.

I was much struck on visiting the states in 1899 at witnessing the enormous strides the internal combustion motor had made in public favor. The engines were in nearly all cases of the single cylinder two-cycle variety, very heavy for the horsepower obtained. All these engines worked at a low number of revolutions, and were consequently not very efficient. It is impossible to make these two-cycle motors run satisfactorily at an increased number of revolutions, as a lead has to be given in order to prevent an unexpected reversal occurring. The four-cycle motor is now rapidly displacing the two-cycle in America. When I was present at the America cup races between Shamrock and Columbia, nearly every American steam yacht of any size carried one or more of these two-cycle gasoline launches, and they certainly seemed to perform their work satisfactorily. Previously to this in England—in fact, in 1897—the Daimler Motor Co., of Coventry, was engineering launches with its two-

cylinder, 6-horsepower, four-cycle, tube ignition motor.

Those of you who have had any experience of the early Daimler launches will remember vividly the troubles inseparable from the tube ignition; in fact, it may be said that the advent of the internal combustion engine for marine work dates from the inauguration of a successful system of electric ignition. Motor launch racing has long been popular in America, the favorite propulsive agent being gasoline, both used in an internal combustion engine and instead of water in a steam jacketed boiler, and these conveyed under pressure exactly as if it were steam to an ordinary marine steam engine. On paper very high speeds appear to have been attained, but as a matter of fact I believe that the Americans do not possess a really high speed launch, and until we have the pleasure of seeing an American competitor for the Harmsworth cup on this side it is doubtful whether we shall obtain any trustworthy data as to their speed.

It was only in the spring of this year that it was proposed by my father to form a marine motor sub-committee of the A. C. G. B. and I, with the object of furthering the sport of marine motoring. Immediately following the formation of this committee came the generous donation of an international cup by Mr. Alfred Harmsworth, which it was decided should be confined to boats of an overall length not exceeding 40 feet, no other restrictions being imposed. It is to be regretted that the time elapsing before the race was too short to allow of any foreign competitors entering. It is true that a Mercedes launch came over, but this boat was ineligible, as it had a German engine in a French hull, and, moreover, broke down from insufficient lubrication before the race. It will be remembered that it was decided to race for the Harmsworth cup in heats, as it was thought by several members of the committee that the wave-making of these fast launches would be excessive and would preclude the possibility of many competitors racing together. This has been shown to be quite a fallacy, a well designed 40-foot hull making very little wash at about 19 knots. It will be remembered that the Napier was the only 40-footer which en-

tered for the Harmsworth cup, and consequently, bar accidents, the race was a foregone conclusion. The engine is a four-cylinder Napier motor of the car type of which the actual brake horsepower is probably about fifty. The hull was built of twenty-gauge steel, and was braced to withstand all strain. The hull was designed for a 1,000-pound engine, but the weight exceeded the engineer's estimate by some 350 pounds, consequently the boat was immersed beyond her designed line. The best speed shown by this boat was at Cowes, and was 18.8 knots. I may say that the forward propeller shown in the plan was never fitted, and the after one alone being used. The motor power of the engine is given by the makers as 60, and the formula adopted by the M. M. A. for M. P. is  $\frac{A \times S \times R}{C}$

= M.P., where A = area of piston in square inches, S = stroke in feet, R = revolutions per minute, and C is a constant = 1000 for 4-cycle and 600 for 2-cycle motors. Napier's engine has a piston diameter of 6½ inches and a stroke of 7½ inches, and is supposed to run at 800 revolutions per minute. Those who care to do so can work this out. I may mention that this is not the first time this engine has appeared in a boat.

The other competitors were two 30-foot launches. One, the Durendal, was designed by Wort, and constructed by Saunders, of three skins of mahogany, sewn together with copper wire. This is a method of construction which undoubtedly produces a light and stiff craft—in fact, so stiff is she that Mr. Saunders claims to be able to suspend her by both ends with the machinery in position, no sagging being noticeable. The beam is carried well aft, and the engine is an eight-cylinder one, constructed by the Motor Mfg. Co., and is reputed to develop 50-horsepower.

The other entrant was the Scelopendra, constructed by F. Maynard, of wood, and engine by Thornycroft with a four-cylinder motor developing 20-horsepower. In spite of her low horsepower this launch made an excellent showing, and was undoubtedly the most efficient in the competition.

The course was up Cork harbor, the length being 7.8 sea miles. I have this distance from Mr. Hamilton, the editor of the Yachtman, who has satisfied himself as to its correctness. This distance the Napier launch, in winning the first heat against Durendal, accomplished in 24 minutes 44 seconds, giving a speed of 18.8 knots. The flood tide, however, was running nearly a knot at the time, so that we may safely assume the Napier's mean speed to have been about 18 knots.

The Scelopendra ran the bye in 30 minutes, 28 seconds, which gives a mean speed, allowing for the flood tide, which had already slackened, of about 15 knots—good work for 20-horsepower. The Napier won the final in slack water in 26 minutes 6 seconds at a mean speed of almost exactly 18 knots.

Early in this year the Marine Motor Association was started, and, after collecting all the information possible, it formulated its rules for assessing the power of motors, or "motor power" as they called it, and these ascertaining the rating of the boats. It may be remarked that the American Power Boat Association, which was started some months later, practically adopted our rules for motor power and rating with but few modifications.

**EDITORS NOTE.**—This article comprises excerpts from a paper read before the Automobile Club of Great Britain by Bernard Redwood.



Having got the rules for power, and the rating of motor boats, the next question was to get out a time scale which should place together equitably in a race boats of various ratings, as is done by the Y. R. A. time scale for sailing yachts.

As tabulated speed results of motor boats were practically unobtainable over here, it was agreed to adopt tentatively the time allowances of the American Power Boat Association; and the few motor boat races which have been held in our waters this year, and excepting the race in Ireland for the Harmsworth cup, have been time races, based on the time scale mentioned above. Unfortunately, these time races are so few that it is difficult to say definitely even now how they will work in practice, but the examples given below will furnish a rough idea of their practical effect. Of course, the essence of a time race is that the actual distance through the water must be known, and this is often very difficult to get at in tidal waters. It is generally said that if a boat runs, say, 3 miles against the tide, and returns with the tide, she has done 6 miles, as the foul and fair tides are supposed to balance each other. Now, although this balancing has the official sanction of that august assembly, the admiralty, it is not correct at all, as will be seen at once by assuming a motor boat that can do 8 knots an hour through the water to run a measured mile along which a 2 knot tide is running. When running with the tide the boat is doing 8 plus 2 = 10 knots over the ground, and she will cover the mile in 6 minutes. When returning against the tide she

will only do 8 minus 2 = 6 knots over the ground, and will take 10 minutes doing the mile. The mean of her times on the mile is 8 minutes, which would credit her with a speed of 7½ knots instead of the 8 knots which we know she was actually doing.

Of course, the speedier the boat is, as compared with the tide, the less will she lose in estimated speed, so that in the so-called speed boats it may be a negligible quantity, but in the smaller and low-powered boats it cannot fairly be so neglected. The consequence is that whilst we may be able fairly to estimate the speeds of the speed boats with the few examples which we have, the actual speeds of the slower boats will only be obtained after we have really had more experience as to the recorded results of races.

After the Harmsworth cup race had been finished, a series of heats for the Yachtsman's cup took place, and as these races were to be held under the time allowance scales of the Marine Motor Association, it gave the first opportunity of seeing how they would work in practice. The practical effect of this race was that Scelopendra beat Napier by 1 minute 23 seconds, and Durendal beat Napier by 2 minutes 50 seconds; but Scelopendra only beat Durendal by 1 second.

The only other time race held for these big launches was that at Cowes on August 7, and as it was run partly in the west-running tide between Cowes and the Leps, and partly in the east-running tide near the East Bramble, it is very difficult to arrive at the actual distance through the water done by the boats. The course was stated on the programme to

be about 20 miles, and probably 20½ miles will give the actual water distance.

Taking this figure, we find that Scelopendra beat Napier by 1 minute 55 seconds, but she only beat Wolverine by 19 seconds. The results thus recorded as between Scelopendra, Durendal, and Wolverine are about as perfect as can be expected, and although Napier failed to give the time required by her rating in both cases, we must have more experience to go on before deciding whether too much was demanded of her, or whether she ought to have shown more speed than she did.

The Wolverine referred to is a 40-foot Saunders boat built of four skins, and engaged with a 12-horsepower Wolverine motor.

It was very unfortunate that Durendal gave up this race, owing, it is said, to trouble with her sparking plugs, as her recorded time would have been of great assistance.

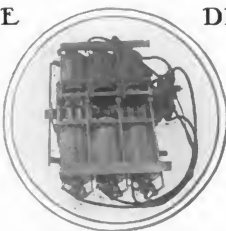
The race at Ryde for King's cup was, unfortunately, a walk over for Napier. This cup was originally given for 40-foot boats, with no time allowance and great interest was shown beforehand, as it was hoped that the new Thornycroft 40-foot boat, as well as the 40-foot Mercedes, would have been there to compete. The Napier, however, was the only boat entered, so the race fell through, and the cup was again offered for a time race. These new conditions brought the three fresh entries of Scelopendra, Durendal, and Wolverine, but only Napier, Scelopendra, and Wolverine started. Scelopendra broke an inlet valve and had to retire, and Wolverine also gave up, so Napier was left in alone to finish the race.

## AUTOMOBILE

Probably the lightest motor of its size ever built in this country is that just turned out by the Duryea Power Co., of Reading, Pa. It is said to develop 40½ brake horsepower at 900 revolutions and to weigh but 200 pounds—5 pounds per horsepower. The motor was built for a New England inventor to be used in an air ship. In general design it consists of two three-cylinder Duryea motors with opposed cylinders. It has a three-throw crank shaft to give a mechanical balance. The bore is 4½ inches and the stroke 5½ inches. The bearings are the same size as in the regular Duryea automobile motor. The shaft and crank pins are hollow for the purpose of lubrication. Jump spark ignition is fitted and the system has but a single coil, with a commutator for switching the secondary current to the different cylinders.

### PENNINGTON ONCE MORE

Cleveland, O., Feb. 15.—One of the most remarkable automobiles ever constructed in this country is being built in the factory of the Eclipse Machine Co. of this city for the Cleveland Motor Co. The last mentioned concern has recently been organized with an authorized capital of \$2,000,000 to build high-powered touring cars, as well as the automobile horse or fore carriage which was referred to in a recent issue of MOTOR AGE. Both types of machines are being built after designs prepared by E. J. Pennington, who has a record on two continents as a promoter and inventor of unusual mechanical contrivances. Some years ago Mr. Pennington invented a gasoline motor cycle which was probably the first of its



THE 200 POUND, 40-HORSEPOWER MOTOR

kind in the country. It was exhibited in Cleveland, and while it never amounted to much in this country, it is said Mr. Pennington sold the European rights for a large amount and that motor cycles are still being produced in England under his designs and patents. Later in England Mr. Pennington brought out a war automobile and report has it that he sold the rights for a large sum to the English government.

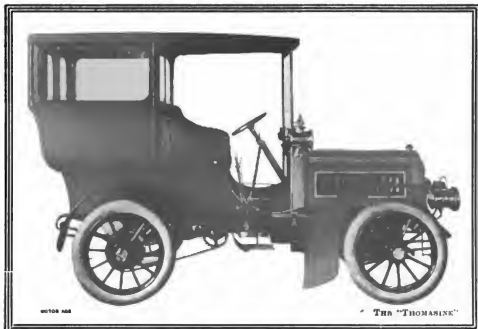
Mr. Pennington is back in Cleveland at the head of the company mentioned, and it is stated the large car being built here follows closely the principles of construction brought out in the English war automobile. Certainly it is a most unique car, differing in many features from all accepted ideas of design and make-up. The car is 25 feet long and is equipped with motors which it is claimed will develop over 300 horsepower. Its inventor claims it will make 100 miles an hour and

## DEVELOPMENT

to demonstrate his claim he proposes as soon as possible to place flanged wheels on the machine and give it a trying out on the tracks of some steam or electric railway in this vicinity. Although not yet completed, the car has attracted an immense amount of attention, particularly in view of the fact that it has been announced that Lewis D. Schoenberg, head of the May Co., a leading department concern in this city, has purchased the car and proposes to take a party of friends on an extended tour through the east and to the St. Louis exposition as soon as it has been put into shape for use.

Perhaps the most remarkable feature of the car is the price said to have been paid for it—\$35,000—also the fact that one of its bodies—there are to be three—is to be fitted with accommodations for sleeping several guests. In brief, the huge machine is to be a private railway car on pneumatic tires, a gasoline yacht on land.

Mr. Pennington is unwilling at this time to go into the detail of the mechanism, but some interesting points were obtainable. No steel or iron castings enter into the construction. All parts are steel forgings or seamless steel tubing. The frame work is made of 4-inch heavy gauge tubing. The cylinders proper are of steel tubing, while the cylinder heads are turned and formed from solid stock. The gear casings are also turned from the solid. The cylinders are copper jacketed and are placed in the forward part of the frame, side by side in a horizontal position, being entirely independent of one another, although they drive on the same crank shaft. In the center



THE "THOMAS" LIMOUSINE

of the crank shaft is a huge fly wheel. The explosions in the cylinders take place at opposite points, one exploding while the other is drawing in a fresh charge. The cylinders and crank shaft are hung from a heavy arched sub-frame, a bronze casting.

The wheels are of steel, fitted with 7-inch pneumatic tires. The front wheels are contained in steering forks closely resembling bicycle forks, the fork and head being produced from a single forging. Drive is by heavy chain to the rear axle. For racing the car will be fitted with a light aluminum body. For park rides and short tours it will have a body with a seating capacity of 28 persons and a canopy top and cross seats with large tonneau in the rear. For long distance tours there will be a luxurious car-like body of the limousine type, provided with Pullman berths, chairs, tables and other accommodations of the finest private railway coach. The interior will be fitted with incandescent lights and will be heated for winter use. It is said that this body alone cost nearly \$10,000. The braking system will include mechanical as well as air brakes.

The car is 80 per cent completed. The machine work is practically finished and the bodies are about done, being the product of a local carriage maker who is famous for fine work. It will take another 6 weeks to assemble and test out the car, and then it will be turned over to Mr. Schoenberg.

Mr. Pennington claims to be satisfied that the car will operate successfully from the start as he has built others of this type, although not of so great a power. The advent of the car in actual service is being awaited with a great deal of interest by a number of local people who have seen it under construction. The Cleveland Motor Co. is not planning to build such cars in quantities, but it is claimed to have several orders for similar outfits which will be built during the coming season.

## TWO NEW LIMOUSINES

The characteristic introductory sentence of the well meaning hymn making the star after dinner speech at every automobiling banquet may be paraphrased from "The automobile has come to stay" to "The limousine has

come to stay." This season every manufacturer has hastened to add a limousine to his line, whether it be composed of small, middle size or large cars. The limousine is vogue. Some of the makers have produced bodies of brand new design in creating these stylish models, while others have adapted their regular tonneau construction to the enclosed structure. Two manufacturers who have not departed greatly from regular construction in their limousines are the E. H. Thomas Motor Co., of Buffalo, N. Y., and the F. B. Stearns Co., of Cleveland, O.

The limousine of the former company, called simply a Thomassin, consists of the regular three-cylinder motor chassis, fitted with a body whose tonneau is square cornered instead of round and made of metal. To it is fastened the enclosed top, the latter being devised so that the glass windows may be removed instantly to provide an open car. The general appearance is that of the conventional limousine with the typical Thomas motor bonnet and dash. The car is especially noteworthy on account of occupying the peculiar position in

the trade of being a full fledged 24-horsepower limousine, listed at but \$2,750.

The Stearns limousine is also mounted on the regular 24-horsepower chassis of the company. The upper body of the tonneau is enclosed by a frame work made of wood and plate glass, is trimmed like a coupe, and has plenty of room to seat three people comfortably. The top is of hard wood, and curtains are provided for the driver's seat, if desired. The plate glass in the limousine is easily removable if the car is desired to be used in the summer with the top, and the whole top can be taken off by removing six bolts. The car is painted jet black, with green molding, red car will be one of the regular Stearns models—striping, and bright red running gear. This for this season.

## A BOOST FOR CHICAGO

"Comparing the New York and Chicago automobile shows reminds me of a story," said a prominent motorist at the A. M. L. banquet last week. "Once there was a class of school children in New York being catechized by the teacher.

"What is the greatest country in the world?" asked the teacher.

"The United States," said the class in chorus.

"And what is the greatest state in the United States?"

"New York," again came the answer.

"And what is the greatest city in the greatest state in the greatest country?"

"New York," fairly screamed the children.

"And what is the greatest thing in the greatest city in the greatest state in the greatest country?"

"There was a moment of hesitation, when a little girl with blue eyes and a pink frock, standing near the foot of the class, piped out,

"The Twentieth Century train to Chicago!"

A Frenchman, M. Richard, won a \$1,000 wager by driving a 15-horsepower car, which had been used 18 months, from Paris to Nice, a distance of 695 miles, without the aid of a mechanic or chauffeur. The distance was covered in 34 hours.



THE STEARNS LIMOUSINE



The Daimler company of Austria has decided that Heironymous, Braun and Werner will drive its cars in the race.

An average of 100 automobiles can be seen in the principal garages of Nice, along the promenade des Anglais, whenever the weather is good.

Count Francois Van der Straten-Ponthoz, founder and honorary president of the Automobile Club of Belgium, who is 88 years old, still takes a very active part in all club matters.

The Northern Mfg. Co., of Detroit, Mich., has increased its capital stock from \$50,000 to \$150,000. At the annual meeting last week W. T. Barbour was re-elected president and D. B. Gunderson vice-president. George H. Barbour resigned as treasurer and V. M. Gunderson was made secretary and treasurer.

"Betsy," the Columbia car which made the Chicago-New York record run last September, was sold last week at the show to F. L. Hartigan, of Chicago. Mr. Hartigan expects to drive the car from Chicago to Florida in the near future, and from there he will ship the car to Cuba and make a tour of the island.

The automobile ordinance of Cleveland, O., has been amended by the city council so as to provide for punishment in cases of careless driving. Heretofore there was no provision on this point. The amendment embodies these words: "That automobiles shall be operated in a careful manner, so as not to endanger or unnecessarily inconvenience any person."

The Albion Engine & Motor Co., of Albion, Mich., which was recently purchased by L. H. Field and associates, will be combined with the Trask-Field Engine Co., of Jackson, Mich., and the two plants will be consolidated at Jackson. The business will be conducted by the newly-organized Jackson Engine & Motor Co., and the equipment will comprise about \$16,000 worth of machinery taken from the two plants.

The Russian government has placed an order for a large number of Deauville chassis.

W. J. Roberts, of Coldwater, Mich., is in the market for an automobile and would like to receive catalogues from manufacturers.

The Rambler Automobile Co., of San Antonio, Tex., has been incorporated with a capital stock of \$5,000 to sell and rent automobiles. The incorporators are A. Stauch, A. C. Shell and F. Kirchoffer.

At the annual meeting of the French Automobile and Cycle Syndicate, M. Darraeq was again named president. The organization has 125 members and closed the year with a treasury balance of over \$3,400.

The Opul Stage Co., operating between Opul and Cera, Wyo., has established an automobile line, making the trip between the two towns in 1 day instead of 2 days, as heretofore. The automobiles carry ten persons.

The Michigan Automobile Co., of Grand Rapids, Mich., wishes to call the attention of the trade to the similarity of titles, but difference in business, between it and the Michigan Automobile Co., Ltd., of Kalamazoo, Mich. While the former company, which was organized 4 years ago, is a dealer in automobiles, the latter is a manufacturer, being the producer of the little Michigan runabout.

L'Auto, of Paris, has set March 4 and 5 for its annual fuel consumption test for commercial vehicles. There will be a division for vehicles carrying passengers, the distance to be 100 kilometers, to be covered in not over 4 hours. The distance of the test for commercial motor cars will be 60 kilometers, with a maximum of 4 hours to cover the distance. The minimum speed is placed at 25 kilometers for the first class and 15 kilometers for the second class. A hill climbing test will follow the endurance run. The total consumption per ton of actual weight carried, regularity of going and average speed will be considered in the distribution of points.

R. G. Bardsdale, of the Bardsdale Automobile Co., of Superior, Wis., during a visit to California received orders for three stage coaches and four hotel busses. He wishes to correspond with manufacturers who are able to fill these orders.

The Root & Vandervoort Engineering Co., of Moline, Ill., will manufacture gas engines and running gears for a new automobile, the bodies of which will be supplied by the Wright Carriage Body Co. The company will build a light runabout and a light tennenn.

With a thousand new automobiles already ordered, the weather man in Chicago will not be in the height of popularity unless he turns on an early spring—though perhaps some of the wankers who have a whole lot of orders to fill are hoping that he will do no such thing.

In a recent motor bicycle race, run on the five-lap indoor wood track of the Galerio des Machines, in Paris, Cissac defeated Marius, covering the 10 kilometers in 6:08, an average of 60 miles per hour. The fastest time for one lap was 114.5 seconds, an average of 63 miles per hour.

The Japanese government has placed an order with the Olds Motor Works for twenty railroad inspection cars like the one exhibited at the coliseum last week. The cars seat four passengers each, having the seats placed back to back. They have 5 horsepower and a speed of 30 miles an hour is claimed.

C. J. Hodge, of the Hodge Iron Co., of Houghton, Mich., is now in Chicago, with headquarters at 601 Journal building, and wishes to receive proposals from cities wishing to secure an automobile factory. The Hodge company has just finished an extensive line of experiments of an up-to-date automobile and wishes to separate the further development of the automobile business from its iron business at Houghton. The car will shortly be described in MOTOR AGE.

It is possible that the 300-mile race for the cup W. K. Vanderbilt, Jr., has given the A. A. A. may be run on Long Island. Under the present Bailey law, the supervisors of any county may give permission for a road to be used for a speed test. It will be remembered that Nassau County, L. I., gave such permission to the A. C. A. for last year's elimination trials. It is said that in one of the automobile bills now pending at Albany even more definite and liberal provision is made for the use of the roads for speed tests on extraordinary occasions.

A trip across the Dismal Swamp of North Carolina was made recently by G. B. Oretion, of Newport News, Va., in an Oldsmobile. The only damage to the machine was the breaking of a battery carbon and the shearing off of a body bolt. The crossing was made at a place where no automobile had ever crossed and where the last crossing was made 2 years ago by a man in a boat. At this place there is an old corduroy road that is considered one of the worst ever followed by man. The wheels of the car sank through nearly a foot of water and mud in the buried tree trunks. In some places the drive wheels merely spun around, as if suspended on jacks, and it was necessary to wrap the tires with ropes.

# AMERICAN MOTOR LEAGUE

## OFFICERS:

ISAAC B. POTTER, President.  
Potter Building, New York.  
CHARLES E. DURYEA, First Vice-Pres.,  
Reading, Pa.  
W. GRANT MURRAY, Second Vice-Pres.,  
Adrian, Mich.  
S. W. MERRIHEW, Third Vice-Pres.,  
154 Nassau St., New York.  
ROBERT L. STILLSON, Secretary,  
150 Nassau St., New York.  
FREDERICK B. HILL, Treasurer,  
32 Blandford St., Boston.

National Headquarters:  
150 Nassau Street, New York

## CHAIRMEN OF NATIONAL COMMITTEES:

LEGISLATION—  
George H. Bidwell, New York, N. Y.  
ROAD IMPROVEMENT—  
R. E. Onda, Lansing, Mich.  
LOCAL ORGANIZATION—  
Charles F. Potter, Denver, Colo.  
TOURING—  
W. H. Baker, Buffalo, N. Y.  
TECHNICAL—  
Charles E. Duryea, Reading, Pa.  
MEMBERSHIP—  
Frank A. Leber, New York, N. Y.  
SIGN BOARDS—  
John B. Price, Hazleton, Pa.  
RACING—  
A. G. Baicheider, New York, N. Y.  
PRESS—  
Joseph Etoclet, Philadelphia, Pa.  
HOTELS—  
Francis N. Bain, Newburg, N. Y.

## OFFICIAL BULLETIN

### MEMBERS AND MORE MEMBERS

The American Motor League needs members by the score, hundred and thousand. It will need them so long as there are automobilizing purposes to be accomplished, for its objects are the objects of individual automobilists organized, and its strength lies in the strength of its membership.

It is the pioneer of all American automobilizing organizations, having been organized by a handful of enthusiasts in 1895. It now has a foothold in forty-four states. The start has been well made. The seed has been sown broadcast. Its fruit must be members, members, members, until the multiplying growth will mean the union of so many automobilists that the organization will be one of the mighty powers in the land, able to demand and command the attention of law makers in the cities, states and at the national capital.

Scattered handfuls of automobilists can never hope to possess the practical usefulness and power that may characterize the national body. The latter has no end of usefulness in such a field as automobilizing where so many and diversified interests are at stake.

It is but the natural method of organization to secure strength, built upon the plant which has proven correct in other lines of effort. It is the logical way of placing automobilists in a position to get what it is their right to have, whether it be good roads or good laws. Its success is not measured by anything except its membership.

Membership is everything. The league cannot lie down upon its success of the past 2 years in this direction and look at itself. It is still young, still growing, and, more than all, still healthy and vigorous. Its future depends upon new members, and new members depend upon the present members.

Every automobilist in this country is eligible to membership. He must be invited to join. From league headquarters all possible ways of reaching him are being pursued, but the members scattered through the forty-four states which claim members can do the most good. They come in direct contact with the possible member. It is their business to get him to join.

The more earnestly the members take a hand in this recruiting work the sooner will they realize what they get for their \$2 a year. Incidentally, this old question of "what do I get for my money?" was never easier to answer than in the present case. Every automobilist who joins the Motor League now gets the chance

to help make of the league just what he thinks it should be.

He does not join a body in which he counts for nothing, and which may or may not deal out favors to him as it sees fit. He joins an organization in which he is of just as much importance and has just the same chance as every other member, and in which the measure of what he and all others get out of it depends entirely upon his individual efforts.

The work of the league is the work of many. A man would be a fool to stand and look on at a young, growing body and say: "When you are able to offer me a big return for my investment of \$2, guaranteed and in the form of collateral, I will join."

The fruits of the league are not to be picked from a fairy tree and handed out by a few to the many, as an inducement for them to come get under its shade.

The league makes its own way, paves its own road, and the width of the road and the character of the paving thereof depend entirely upon the individual effort of the individuals composing it.

Each time a person makes himself a part of the league the benefits of the league are increased. The league member does not give the league treasury \$2 as an investment. The league is no lottery; it is not a bank.

The member gives his membership. His membership is the investment. The returns are governed by the use made of the membership.

In the pioneer stage of any such organization some members must work harder than others that eventually all may reap alike. The league wants pioneers who are not afraid that they will give more than others and only receive the same. The true pioneer realizes that without his effort no one would get anything.

But the pioneer days when some must work hard, may be shortened by concerted effort to increase membership. Each new member knocks a day off the period of pioneerism. Each new member brings the day of abundant return nearer.



The American Motor League is a power already. The real pioneer days are practically over. Its membership will be multiplied many times, but the hardest work has been done. The influence of the league has been brought to a point at which it may be quickly spread like wild fire through all communities of the land.

This is the propitious time. Effort now is more availing than it has ever been. Returns are quicker and greater. It is up to the members to join hands with the officers in a sharp, decisive campaign for a membership that will make of automobilizing an organization too powerful to be disregarded by any interest unjustly conflicting with its objects.

The national headquarters has no key. The place is never shut and the work never stops. The member who is not in close touch with headquarters should write to the secretary.

The ribbons of effort are flying all over the face of the land from 150 Nassau street, New York. Jump on the nearest ribbon and nail it down tight in your community. Headquarters will help you, will encourage you, will suggest ways and means, and will furnish you with working material. Pittsburgh organized a local consulate of sixty members in a short time.

Let there be such a spitter of league motors in the next few months that the impulse will shake the whole United States.

### THE FIRST BANQUET

The first annual banquet of the American Motor League was held at the Victoria hotel, Chicago, last Friday, February 12. It was not an immense affair, but it was successful and was a beginning. Held on Lincoln's birthday it was not only commemorative of the freedom which that great martyr gave the human slave, but suggestive, as well, of the freedom which good roads and the automobile are extending to man's silent burden, the horse.

Seated around the table were enthusiasts, each wearing the big red chrysanthemum which was a mark of distinction of old and new league members at the Chicago show. These enthusiasts included such veterans in the league as Charles E. Duryea, its real founder and first president. All of these and the younger members, too, left the banquet with a new vigor for the work of the league and with visions of great banquets at which hundreds and hundreds of leaguers should sit down together. The account of the dinner is given on another page of MOTOR AGE of this issue. It was a good fellowship affair, worthy of the cause it represented.

# MOTOR AGE

VOL. V. NO. 8

FEBRUARY 25, 1904

\$2.00 Per Year

## THE CARS AT THE GREAT LONDON SHOW



LONDON, England, Feb. 13.—Special Correspondence.—The exhibition under the auspices of the Society of Motor Manufacturers and Traders which opened yesterday in the Crystal palace and which continues until February 24, is by long odds the greatest event of the kind ever held in England. The great building is crammed with vehicles and appurtenances, and were there a lot more cars to be shown they could hardly be displayed without utilizing some of the side courts which are not at all suited to such purposes. As it is, the available side courts have been taken possession of by the motoring fraternity, and thus Crystal palace was never before so full of any one thing as it is this week of motor cars and things relative to them.

Of course the show is not another salon d'automobile borrowed from Paris. It could not be. But it is so much greater than any of the British shows of last year that the true Briton cannot but feel that it will not be long before the Crystal palace houses each year the representatives of as great and varied a production of motor cars as does the Grand palais.

As a mechanical study the show is a real treat, but a somewhat tantalizing one. Just as at Paris, there are so many cars on which novelties are seen that the person viewing the show cannot readily gain any impression of tendencies in design and construction. Only in the broad measure of general impression can the progress of the British industry during the last year be gauged without careful and scrutinizing study. Harriedly, with view to catching a post, a closely drawn mechanical critique of the show is impossible.

Imagine a great, glass-roofed hall 1,200 feet long and over 100 feet wide and filled with motor cars; imagine all sorts of ramifications from it and all filled with motor cars. Then you have the Crystal palace show, with its 10,000 electric lights, which are not enough to brilliantly illuminate all of the displays.

The main floor, or nave proper, the top corridor, the transepts, the spaces around and back of several entrances, and several of the side courts are crowded with motor car and appurtenances displays. Alongside the orchestra pit is the exhibit of clothing and similar articles, while down in the lower hall all of the heavy commercial vehicles and the marine motors are grouped.

From this immense jungle of the British motor industry's proudest beauties a few lines of commercial tendency are broadly, plainly marked—other and finer distinctions lose their course in the maze of differences.

In running gears there is a marked increase of wheel base, showing the appreciation of the French makers of the necessity of longer cars to have been duplicated in Great Britain. The increased length applies to all classes of cars. Comfort has succeeded speed in motor car building. Racers are racers; touring cars are touring cars. Long wheel bases are a part of a modern road car. Sunlit cars are seen galore with 6½ and 7-foot wheel bases; 9 and 10-foot wheel bases are not exceptions in heavy tonneaus.

The pressed steel frame is in vogue, though

as at the Paris show there is a great division of practice in running gear frame structure. Tubular, angle and channel iron frames are all represented by reputable makes, while aside from the pressed frame the armored wood frame has the most representatives. In all running gears there is a decided tendency toward alighting or simplifying the sub-frame.

Motor car bodies show a great refining influence. Whether this is the result of the work of the many notable carriage makers who have entered the automobile body building field or whether it is simply a feature of the natural progress of the motor industry is undeterminable. It is certain at any rate that not only have many new and probably useful forms of bodies been devised, but their construction and upholstering tends more to comfort and their finish is much more excellent. Some of the finishes border on the gaudy, but on the whole color and decorative effects are in good taste and high class. Side entrances to tonneaus are sufficiently numerous to warrant the belief that this form of body will become a standard pattern. Glass fronts with folding rear hoods and canopy tops are in great profusion, while adaptations of the limousine are common, even on moderate price touring cars.

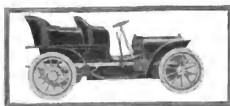
In motors there are few freaks or actual novelties—several of the features brought out tentatively a year or two ago have become more or less general fixtures, but there are no sweeping innovations. Mechanical inlet valves are more numerous and nearly every motor has some sort of carburetor in which the mixture is automatically controlled in quality according to the variance of motor speed and consequently of total of fuel intake. There is a smaller proportion of individually cast cylinders than at the Paris show, but this construction is gaining notably. The cellular radiator is everywhere. The slight check in its popularity which seemed to be indicated by the French



ARTHUR HALL

THE SHOW PORTER





THE CHENARD &amp; WALKER

show is not noticeable here. However, many of the exhibitors—and some of the best among them, too—have stuck to the tubular radiator with flanged or ribbed water cooling pipes.

In the number of cylinders there are two popular departures, the unexpected adoption by many makers of the three-cylinder motor and the creation of several very attractive six-cylinder models. In either case the obtaining of a mechanical balance seems to be a principal object. The increasing flexibility of motors has led to a cutting down of speed changes and many cars of makes in which formerly three or even four forward speeds were provided have only two speeds. Direct drive on the high speed is almost universal, but it is a minority of the sliding gear transmissions which are so arranged that there are no idle gears running when on top speed.

While monster cars are numerous, the 8 to 12-horsepower patterns represent the rank and file of the industry and seem to be the most popular among the purchasers.

Altogether the exhibition shows a decidedly rational adaptation of the motor car to the uses of the general public. The spectacular has been buried in the practical and the practical has become recognized as such by the public. The Americans claim they are on the verge of rivaling France in automobile production. England also is to give in before France a close race.

Below are briefly mentioned some of the principal characteristics of prominent cars at the Crystal Palace:

**STAR ENGINEERING CO.**—In main features the Star cars follow French practice, and the little single-cylinder, 6-horsepower car, which is shown for the first time, is a miniature of the larger cars in this respect. This company also shows the detachable Cape car hood, which it claims to be the first to adopt for motor purposes.

**SPEEDWELL MOTOR & ENGINEERING CO.**—The new Leon Bollee car with the Bollee carburetor is shown for the first time. This is really two carburetors in one, and as the speed of the engine increases the second carburetor is automatically opened by the governor. At low speeds the engine works from the smaller volume of the mixture furnished by the smaller carburetor. The engine and gear are flexibly suspended, so that these parts can move to a limited extent on the frame. Flexibility is the talking point of the engine power and mechanism throughout.

**R. THOMPSON & CO.**—One of the features of the Achilles car are long phosphor bronze bearings fitted to the back axle, so that if the balls should fracture, plain bearings come into action.

**WESTON MOTOR SYNDICATE.**—In the Chenard & Walcker car the frame is of the slitch-plated wooden type, with spring hangers bolted in position. This frame is stiffened when necessary by transverse channel steel members, and carries the motor and gear box on an under frame of similar section. The motor, flywheel, clutch, clutch brake and gear box are all en-

closed beneath by a shaped sheet steel apron bolted to the main frame. The engine has four cylinders, and all the valves are mechanically operated, the exhausts being on the right and the induction valves on the left. The rear axle drive system has undergone a modification in design. The fixed weight carrying axle is swept downward as to its central portion, so as to allow the gland bearing of the differential gear box taking the driving level spindle to pass over it, the live axle being now set at the ends in the same horizontal plane as the fixed axle. All the axles and shafts throughout the car are carried in the same horizontal plane.

**S. A. MARPLES.**—The Mercury two-cylinder and Wladora four-cylinder cars have mechanically operated inlet valves, automatic carburetor, fan flywheel, sheet steel clutch, differential gear, and countershaft coupled by flexible joint to the change speed gear. All control is concentrated on the steering wheel.

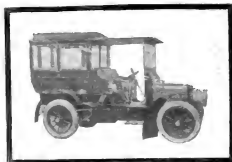
**JOHN MARSTON.**—A new six-cylinder car is shown, the cylinders being cast in three pairs, with mechanically operated valves with variable inlet, the cams being tapered so that the variation is obtained by sliding the valve shaft. The clutch is metal to metal, running in oil; direct drive on the top speed. Metal to metal brakes running in oil are also fitted.

**NEW ORLEANS MOTOR CO.**—This company's car has a number of special features. The four cylinders are cast separately. The clutch is of the inside type, so there is no thrust when it is working, and special provisions are made for accessibility to the whole clutch. The gear box is joined to the base chamber of the engine by an aluminum extension, which also serves as a protection for the clutch, the motor and gear box being practically in one piece.

**RYNKIELD ENGINE CO.**—The cars of this company are exhibited for the first time at a motor show. The motors are all 10-horsepower and the models include a touring car, station cart, light delivery wagon and a victoria. The cars have duplex clutch, steering and controlling devices of new design.

**SIDDELEY AUTOCAR CO.**—These cars have mechanically operated inlet valves, worked by the same cam shaft as the exhaust, and placed above them, with variable lift, controlled from the steering wheel. The transmission is very strong and ample provision is made for flexibility of drive. The 12 and 18-horsepower cars have vertical engines and the 6-horsepower has a horizontal engine, with the Wolseley type of transmission.

**SIMMS MFG. CO.**—Among the new features are the Simms-Bosch high tension magneto ignition, spark-advancing device, a new plug. Simms patent automatic carburetor, irreversible steering gears, detachable clutches, dust proof universal couplings, new water cooling pumps and a combined hand and foot accelerator.



MOTOR AGE

THE MATUTLEY



THE ARIEL

**STANDARD MOTOR CO.**—The two-cylinder cars show have an engine of 5-inch bore and 3-inch stroke with mechanically operated valves, four speeds forward and reverse, and an automatic carburetor.

**GOBSON MOTOR CO.**—The chassis of the 25-horsepower Gobson-Brillie is shown with its tandem engine. The clutch has a small metallic leading cone in the center and a surrounding conical, leather-lined truncated cone of the usual form. One of these cars is exhibited on the grounds, driven by Durney, the holder of the flying kilometer record of 26.2.5 seconds.

**HEWETSON, LTD.**—The special features of the Benz-Parsifal cars are the gear drive, governor acting on the inlet valve, clutch running in oil bath, internal dustproof brakes and pressed steel frames.

**LANCHESTER ENGINE CO.**—In the new patterns the two-cylinder engine, silent worm drive and epicycloidal gears remain about the same as last year, though some minor improvements are noticed. Ball and roller bearings are fitted to the crankshafts, crank axles, change speed countershaft, wormshaft and road wheel bearings. Wood wheels with special form of spoke are shown on some models. A section of the balanced engine is shown.

**LEA & FRANCES.**—The main features of this car are a three-cylinder horizontal long stroke engine, connecting rods of great length, so that the angularity of the thrust from the crankshaft to the cylinder wall is reduced to the utmost; mechanically operated inlet valves, direct drive on second and third speeds, indirect or compound on the first and reverse; live back axle of original design, II section tapered steel frame, side entrance and long wheel base.

**LONDON MOTOR GARAGE.**—The Pipe cars show have mechanically operated inlet valves, internal expanding brakes and control from steering wheel. The Jenatry magnetic clutch is shown at an English exhibition for the first time.

**MANN & OVERTON.**—In the Georges Richard Brazier car the carburetor is made with two jets inclined toward each other at such an angle that when the suction of the engine causes the gasoline to spurt through the jets, it issues and mingles with the air and takes the form of the flame of acetylene lamps. It is claimed that this delivery makes the most perfect mixture, while the resistance afforded by the impact of the angular jets prevents the delivery of too much gasoline as the speed of the engine increases. In addition to the permanent air feed, a pierced ring around the hot air pipe is provided so that the carburation may be varied to suit different hygroscopic conditions. The gear gives four speeds forward and reverse, the fourth speed being on the direct drive.

**DE DION-BOUTON, LTD.**—The 6-horsepower car, which has been especially designed for doctors, has three seats with leather hood, glass wind shield, side doors and solid tires. The 12-horsepower car is a long wheel base convertible brougham or double phaeton.

**HUNTER BROS.**—These two and four-cylinder cars have mechanically operated valves, high tension rotary magneto ignition, pressed steel frame, new gear box, spring drive taking up the shock from the engine, worm drive to the back live axle, push pedal for throttle control, and Longuemare carburetor with automatic air supply.

**DURYEA CO.**—The three-cylinder car is shown is 12 and 15-horsepower. It has no inclined engine in the center of the car, epicycloidal gear, two speeds and reverse, single chain drive on to one-piece balance geared live axle, direct drive on the top speed, new forecarrage with triangulated bracing, inclined steering centers, all steering connections in tension, one hand control, with throttle on the steering handle and a new governed automatic carburetor.

**EAGLE ENGINEERING & MOTOR CO.**—In these cars the engine is governed by the inlet, and there is a special design of tool boxes conserving the front and rear mud guards. There is a honeycomb cooler and fan, three speeds by sliding gear and a new pattern bonnet. A single cylinder, three wheel car is shown.

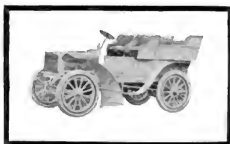
**S. F. EDGE, LTD.**—The six-cylinder Napier attracts especial attention as being one of the highest powered cars yet produced. In the improvements noted is a new specially strong radiator for forced draft, high tension synchronized ignition. All wires leading to the commutator are stationary. Only one coil and one brush are required. The carburetor is a Napier hydraulic, the steering gear is adjustable and there is a metal to metal friction clutch. The general features of the Gladiator cars are wood frame strengthened with steel fitch plates, engine and gear mounted on steel underframe, self thrust clutch, sliding gear and chain drive. The 18-horsepower car has a side entrance.

**RELBIKE MOTOR CAR & ENGINEERING CO.**—The Relbike Junior is a new two-seated car with 7-horsepower single cylinder engine, mechanical inlet valves, governor, geared pump, central axis drive and stamped steel frame. The Relbike engines have been equipped with mechanically operated valves for 3 years.

**DEARY & CO.**—The special features of the Martini cars shown at this exhibit are four cylinders, Simms-Bosch rotary magneto ignition, mechanically operated valves, pressed steel frame, honeycomb radiator, throttle lever on the steering wheel, double acting brakes, countershaft brake, water cooled, and ball bearing throughout.

**BROCHOT MOTOR CO.**—A new device to prevent undue jolting over bad roads is one feature shown, and the carburetor is so designed as to insure a thorough mixture of gasoline and air.

**BRUSH ELECTRICAL ENGINEERING CO.**—One improvement on the 18-horsepower car is a clutch with compensating joint to take up the drive without any appreciable shock. There is oil lubrication to all bearings, mechanically operated valves to the engine, and an arrangement automatically retarding the motor upon



MOTOR AGE

A. H. H. H. H. H.

pressing either of the pedals or applying the hand brakes.

**CENTURY ENGINEERING CO.**—The special features shown are improved double acting brakes, patent automatic electric light for illuminating the gear change sector at night, and the engine governed on induction.

**DAIMLER MOTOR CO.**—The special features of the new four-cylinder cars include slow running engines, suspension of engine and gear direct on the main frame, no underframe being used; mechanically operated valves, single trembler coil, automatic carburetor. A facsimile of the king's Daimler car is shown.

**A. DARRACQ & CO.**—The 30-horsepower four-cylinder Darracqs are exhibited for the first time in England. The special features of these cars are sheet steel frames, stamped in one piece, forming bed plate for the engine and gear box, and bringing the carriage body 6 inches lower.

**ARIEL MOTOR CO.**—These cars have mechanically operated and interchangeable valves, high speed engines, automatic carburetors, honeycomb radiators cooled by fan, control from the steering wheel, gear-driven throughout, and variable lift to the inlet valve operated from the steering wheel. The car used in the Snowdon mountain climb is shown, as is also a set of bevel gears which have been run over 20,000 miles.

**MAUDSLAY MOTOR CO.**—This exhibit consists of a 25-horsepower wagonette omnibus, an 18-horsepower double phaeton, and an 18 and a 40-horsepower chassis. The omnibus is fitted with a convertible body, and when the omnibus top is removed a touring car is formed. The 40-horsepower chassis has a six-cylinder engine, driving through a leather-faced friction clutch to the gear box, contains four speeds and a reverse, operated by a single lever, and thence by side chains to the rear wheels.

**ALBION MOTOR CAR CO.**—The special features include mechanically operated inlet valves, magneto ignition, Murray patent governor, spring drive and protected driving chains.

**ALDAY & ORMONS.**—A new pattern three-seated car is shown. The tonneau has two seats with a front entrance, and there is a bucket seat for the driver. The engine has mechanically operated inlet valves, and the change speed gear gives two forward speeds and reverse with direct drive on the top speed. It has a live axle with cardan shafts between the engine and gear box and between gear box and live axle. The axle runs on long, plain bearing, but is provided with balls to take up the side thrusts from the bevel drive. It has metal to metal expanding brakes, long springs and is strongly constructed throughout.

#### ITALY HAS A GOOD SHOW

The automobile show of Turin, Italy, was opened February 6 by the duke of Genoa, who represented the king. Other royal personages and a very large number of noblemen mingled

with the several thousand invited guests. There were fully 5,000 people present. There were twenty-one automobile, accessory, motor bicycle, motor boat and bicycle concerns represented at this show. Of this number thirty-one were foreign, of which twelve were from France, five from Austria, four each from Germany and Belgium, and three each from the United States and Switzerland. The more important cars on exhibition were the de Dion-Bouton, F. I. A. T., Oldsmobile, Electromobile, Panhard & Levassor, Gubron-Billie, Darracq, Tharron, Girardot & Voigt, Mercedes, Krieger, Martini, Benz-Parsifal, Peugeot, Clement-Bayard, Ceirano, Rochet-Schneider, Mors, Decauville, and Serpollet. Among the most conspicuous motor bicycles were the Rambler, Peugeot, F. N., Wanderer, Knapp, Moto-Cardan, Quagliotti, Sarola, Antoine, Rosselli and Luveca. The F. I. A. T. company, the Societe des Bateaux Automobiles de Milan, Magnani et Lanini of Genoa, and Serpollet, Hurlu and Darracq, of Paris, exhibit motor boats. The display of apparatuses and parts is the most extensive ever seen at any Italian show.

One of the features of the exposition is the Renard military road train, first shown at the Paris exposition last December. The 200-horsepower Doherty car is another attraction. According to the maker of this car it will prove the fastest automobile ever built. It will be sent after all short distance records at the close of the exposition.

The regular Italian touring cars show great improvement over last year's models. They are built with much finer finish, and with a view of attaining the greatest comfort. There are few really important novelties, as the general tendency is that of copying French and German styles. The attendance averages 2,500 people per day. One of the features was the attendance of 400 workmen from different automobile factories in Milan.

#### HOLLAND'S FIRST SHOW

The first great automobile show held in Holland was opened February 12 at Amsterdam by Jonkheer Borel van Hogelanden, mayor of Haarlem and president of the Nederlandse Automobiel Club. In a short address the president referred to last year's endurance run, which was the beginning of the automobile enthusiasm in Holland and which did more for the pastime than all other previous efforts, inasmuch as it gave a chance to the country people to see what automobiles are and what they could do. There were sixty exhibitors in the hall, including a number of bicycle manufacturers. The principal French, German and Belgian automobile and motor cycle manufacturers made displays.

A few years ago a western young man rode a bicycle a mile down hill with the wind in his back in 2 minutes 16 seconds, and the world unrivaled. Now with the automobile mile record at 39 seconds on the level, wonder at it has been quickly swallowed up in preparations for doing 2 miles a minute.



MOTOR AGE

THE THORNCROFT



MOTOR AGE

THE LANTERN



# MOTOR AGE

Published Every Thursday by  
THE TRAMP PRESS CO.

1303 MICHIGAN AVENUE CHICAGO  
Telephone Calumet 7011

New York Office, 114 West 19th Street,  
London Office, American Publication Bu-  
reau, 35 Abchurch Lane, London, E.C. 4, N. W.

OFFICIAL PUBLICATION OF THE  
**AMERICAN MOTOR CYCLE ASSOCIATION**  
INCORPORATED IN THE STATE OF NEW YORK

OFFICIAL PUBLICATION OF THE  
**AMERICAN MOTOR CYCLE ASSOCIATION**  
INCORPORATED IN THE STATE OF NEW YORK

Entered at the Chicago Post Office as Second Class Mail Matter

Subscription, Two Dollars per Year  
Foreign Subscription, Four Dollars

Any Newsdealer may obtain Motor Age through  
the Western News Co., Chicago, or any  
of its branches, on a returnable basis

## MOTOR CARS FOR WOMEN

THE AUTOMOBILE is the best vehicle on earth for women to use. It is safer, more convenient, more reliable and more efficient than the horse and buggy. Hundreds of women have learned this; hundreds more learn the same thing each season. Automobileing has reached the end of the beginning. The demonstration by pioneers that it is a practical vehicle has been accomplished. It is even unnecessary after the arduous but successful affair last fall to hold endurance runs that the efficiency of motor cars may be shown. It has been proven and is generally known. Automobileing is now in the process of common acceptance—in the stage in which the public adopts itself to the new vehicle and the new vehicle is adapted to the varying requirements of the public. Automobiles can go anywhere, under any kind of service, beat any other kind of road transit. This broad statement of their worth applies just as much to their use by women as to their use by men. They are not only the mediums of great speed, of great power, of great endurance. They are pleasure vehicles without peer and may be adapted equally well to the leisurely travel of midday. The automobile is stylish; its mediums of control are sure; its response to the guiding hand are quick; its temper is even and never ruffled; it has no fear; it is comfortable; it is clean; it furnishes the intoxication of motion without the effort of walking or bicycling; it is well suited to the purpose of shopping, calling or matinee going as to the purpose of park or country pleasure riding.

Women have shown that women can manage an automobile without assistance, and have also shown that, if necessary, they can care for it as well. Prejudiced ones may call attention to the fact that women may not delight in fussing about an oily, greasy, perhaps dirty, mechanism. They do not have to. The maintenance of the car in good running order may be left to other hands and still the automobile is just as much under their own supervision as the horse and buggy they are unaccustomed to use. It is not presumed by even the most devoted horseman that the stylish young woman who drives her equally stylish team and trap down the stylish boulevard of a bright afternoon attends personally to the maintenance in good order of that trap and team. The cost

of the harness and the carry comb and the hay pitchfork are used by other hands than hers. The rig is hers to use; its care is for others. It is not a fair comparison between the horse and the motor to overlook the disadvantages of the former in pointing out the necessary care entailed in the use of the latter. Were the young woman in the case compelled to choose between caring for a trap and team and caring for an automobile, gasoline, steam or electric, doing every bit of the necessary work herself in either case, it is almost certain she would choose the maintenance of the automobile. The amount of disagreeable work connected with its maintenance is less. Persons are apt to look upon work which they are accustomed to do as incidental, while a new brand of work, though perhaps less arduous to obtain equal or greater results, is held in the light of a serious disadvantage of the medium necessitating it. Suppose, for instance, there is a small city in which there are 500 horse-drawn outfits. The total of work necessary to keep these rigs in good running order is greater than would be the total of work necessary to maintain an equal number of automobiles. In such a community probably half of these vehicles would be for pleasure and half for business. One-fourth the number of business automobiles would accomplish the same amount of work as the commercial horse-drawn rigs of the town. Hence the total of work by the substitution of automobiles would be reduced almost 40 per cent, even were the amount of maintenance work of each individual vehicle the same in each case. But the townspeople are apt to forget the hours and hours spent in taking care of their horses and wagons; they have done it so long it is to them a part of existence. The work of maintaining a motor car is to them an unreasonable procedure. They would recognize superiority in the automobile were it a vehicle that could run and run and run and keep on running just by pushing a button. They fail to see the fairness in offsetting the work required to utilize the horse and the disadvantages of his service against the work of maintaining an automobile and the disadvantages of its service. The prejudiced critic of the automobile never realizes the fact that the automobile does more than the horse and buggy, when comparing its service with that of the old style of conveyance. It might be a revelation to horse advocates were automobile makers to put out a few small automobiles which would do just what a horse does and no more; that the scooters then might see the difference in cost, convenience and maintenance. It is unreasonable to expect a machine which can go over the roads at 40 miles an hour, hauling seven or eight persons, to be maintained without cost and no work. It has been shown that it can be maintained at less cost and with less labor than a horse-drawn vehicle doing half or one-quarter the real work. Suppose an automobile were built whose maximum speed were 10 miles an hour for 3 or 1 hours at a time, or which might be driven all day at 6 miles an hour, hauling two persons; which would be allowed to stand unused 12 out of every 24 hours; which would require an hour's work morning and evening to be kept in working condition and with extra work cleaning the carriage, etc.; and which could not be stopped at 8 miles an hour inside of 20 feet. This would be a poor automobile, but it would be an automobile which would equal the service of a good horse and buggy, and at a very much smaller cost of operation. Automobiles for women possess all of the advantages over the

horse and buggy that do automobiles for men. They are eminently more efficient than the horse-drawn conveyance and require less work, whether this be of operation or of maintenance. If the automobile is preferable for the business and pleasure purposes of men, they certainly are preferable for the social and pleasure purposes of women.

## WITHOUT SPEED CHANGE GEARS

EACH YEAR of its development the gasoline motor as applied to automobiles becomes a more flexible power producing medium. Almost as wonderful as the change in vehicle construction during the last 3 years has been the improvement in motors, and this season almost every American maker counts flexibility as one of the chief advantages of his motor. Great range of speed control of the motor lessens the necessity for speed changes by mechanical means in the transmission of power to the driving wheels; the greater the flexibility of the engine the less the utility of speed change gears. It is common practice to run cars entirely on the high speed or direct drive except in starting and climbing unusually steep grades. With many cars it is possible to vary the speed from 4 miles an hour to the maximum speed without changing the gears. It is reasonable to suppose that this increasing flexibility of motors will continue. It is possible that it will reach a point at which the reduction of speed is accompanied by such a favorable differential ratio of power reduction that the use of the transmission speed change gear may be entirely abandoned, particularly on small cars. European, and especially British, manufacturers are more generally working toward this end than the makers in this country. The six-cylinder motor which has been brought out by several English makers is a step in this direction, the only direct advantages claimed for this form of motor being its excellent mechanical balance, constant application of power and flexibility. What will be the ultimate result of the development of the application to vehicles of the power of the hydro carbon motor can, of course, be only conjectured, even if there is chance for conjecture. It is certain, however, that should it become possible to apply the power always direct, with one forward and one reverse mechanical application of it, a great step would have been taken toward motor car perfection.

◆ ◆

Automobile sport is not only for the rich. Special provision has been made by the Detroit Automobile Club to make the Gordon Bennett cup race an especially attractive entertainment for the man who works for his money, and it has succeeded in securing a special hotel concession whereby rooms with single beds may be rented for the night for \$7.50 each. Breakfast, comprising fruit, coffee and rolls, is guaranteed to cost not more than \$1.50 and to be worth the money. Waiters will accept tips if sufficiently persuaded.

◆ ◆

Automobile racing needs electric timing devices which are automatically operated by the passing of the car to be timed over the tape marking the starting and finishing points. Motor cars are too fast to be timed by stop watches or even by electric machines depending partly upon the human element.

◆ ◆

He is a man of iron will who can carry a \$1,000 roll of bills through an automobile show without buying a car.

## CUP CONTEST

According to Roger Wallace and Julian Orde, members of the sports committee of the Automobile Club of Great Britain and Ireland, it is possible that the English trial race will not be run on the Belgian Circuit des Ardennes because the mayors of two villages located on the road have made such unreasonable financial demands for the use of the road passing through their villages. "The burgomasters have realized the importance of the race, and are under the belief that all motorists are millionaires, or at least have wealth beyond the range of ordinary mortals," said Julian Orde, "and the terms upon which the roads can be obtained for the day of the proposed race are somewhat beyond what we had expected." The sanction of the Belgian government would also have to be obtained, but this is generally believed to be an easy matter, on account of the well known enthusiasm of King Leopold for everything concerning automobile matters. Concerning the hotel charges, Mr. Orde said: "They are very high, but it must not be forgotten that Homburg is a good center for all countries, and that it attracts, every year, visitors from all parts of Europe, whether there is to be a motor car race or not." Mr. Wallace stated that the Automobile Club of Great Britain and Ireland had secured the use of 100 of the best rooms in Homburg at a reduction of 25 per cent on the charges fixed by the hotel



ON THE FRENCH ARDENNES CIRCUIT

syndicate. While Mr. Orde did not give out the amount the Belgian mayors asked, it is stated that each desires \$2,000. Besides, the Belgian authorities are reported to have stipulated that they will require a fee of \$1,250 for each car that would compete in the race.

The French elimination trial race will not be run over the circuit de l'Argonne, but over the French circuit des Ardennes. The road will be about 77½ miles long, and will have to be covered at least four times. The start will be at Bethel and the following villages will be traversed by the contestants: Sanlt-le-Bethel, Biermes, Menil-Annelles, Paurres, Roure, Voussiers, Bailly, Quatre-Champs, Le Chene, Tannay, Chemery, Chichery, Donchery, Dom-le-Menil, Flize, Boulicourt, Foix, Cretes de Poix, Neuville-sous-Tourneurs, Cretes de Neuviy, Faisault, Sauleux-Mondin and Novy, with the finish at Bethel. Rene de Knyff, who went over the road as a commissioner for the sports committee of the Automobile Club of France, said: "There are much better roads in France, but it is perfect because it comes very

## TRIAL EVENTS

near to the German road, where the final battle of superiority will be fought. I believe such a road is wanted and if some wished for an easy course they are under a wrong impression as to the object in view. In a general way the circuit des Ardennes is striking similar to the Taunus road and has about as many dangerous stretches, sharp curves and beautiful long pieces of level road, very wide in some parts and narrow in others. As to speed possibilities, I think this road offers the same advantages as any other, and it will be up to the ability, nerve, and care of the driver to get the best out of his car."

According to the present plans the start of the Gordon Bennett race will be made at 7 o'clock in the morning. Figuring upon possible delays and bad weather conditions during the early hours, the race may not be ended before 4 or 5 o'clock in the afternoon. It is figured that at least 70 minutes of neutralization will be imposed on each circuit, and as there will be four, this represents 4 hours 40 minutes, which will not be taken in account in the race. It is estimated that an average of 100 kilometers will be reached over the proper racing ground, which means that each circuit would be possibly covered in 75 minutes or 5 hours of actual racing to cover the 310 miles of the entire course. Such speculations are now a fact in continental Europe.



ON A RAILWAY CROSSING

Mr. Kimball, of the Central Automobile Co., says the list of the Napiers to reach this country will be those intended for the Boston show. They are to be shipped on the Ivernia, due at Boston March 10.

Eddie Bald has entered the employ of the Electric Vehicle Co. and has gone to Hartford to study the machines. This gives rise to the guess predicted on his engagement and President Budlong's known predilection toward racing as an advertisement that the Electric Vehicle Co. has in mind the building of a car for racing and record breaking and that Eddie Bald will be its driver. Bald is said to have confirmed this story.

Manager Davis, of the Knox Automobile Co., reports many inquiries for delivery wagons.

"The Martins," says Alexander Fischer, "possess the chief features which have made the Rochet-Schneiders popular. Among the added features, however, will be Mercedes bearings and a new carburetor. I shall import the 20-horsepower model only. Its price will be \$7,500. I expect the first Martini here within a week."

Joseph L. Carrollo, proprietor of Lakeside park on Onondaga lake, has filed a claim for \$152.65 against the city of Syracuse on account of damages alleged to have been done his automobile, which was partly wrecked by running into a hole in the East Water street pavement on November 13.

## METROPOLITAN GARAGE GOSSIP

Hollender & Tugeman have ordered a F. I. A. T. racing car for the track circuit. It may arrive in time for competition at the Virginia Beach meet in May. It will be of 60 horsepower and of the pattern the Italian team will drive in the international cup race.

Elliott Mason, of the Pope Mfg. Co.'s downtown store, is expecting the first of the Pope-Tribune runabouts March 15.

Alexander Fischer has taken the exclusive agency for this country of the Martini cars. These are built by the well-known rifle manufacturing firm at Geneva, Switzerland, under a Rochet-Schneider license.

Horace B. Day, formerly of the Cadillac Co., of New York, has taken the agency for the Queen and also for the Wolverine—Detroit-made cars. He has opened a spacious and well appointed two-story garage, occupying the entire building at 60 West Forty-third street. A Queen Demonstrator car is already at hand and the Wolverine one is expected March 1.



ONE OF THE FAST STRETCHES



TYPICAL STRETCH OF ARDENNES CIRCUIT

The Richmond Automobile Co. has taken the Elmore agency and opened a fine garage at 62 West Forty-third street.

F. A. La Roche has cabled for one of the Darracq cup candidates to be sent over here in May for track racing. He will retain the Blue Streak he used last year, and also import a car for the lightweight class contests.

The West Forty-third street retail district is growing. It now embraces the Sidney B. Bowman Automobile Co., Clement; the Richmond Automobile Co., Elmore; A. G. Spalding & Bros., Autocar; Horace B. Day, Queen and Wolverine; and the Pioneer Automobile and Campus Motor Co., Stevens-Duryea.

The Ansonia Motor Car Co., which deals exclusively in second hand machines, has two garages. Its main showroom is at 1064 Broadway, near Sixty-sixth street. "There is a big demand for second hand cars," said Manager Townley, "but they must be in prime condition and of recent vintage. There are really not many of these to be had. Those having them and intending to buy this year's models are holding on to their old cars until warmer weather shall induce them to take out their new ones from the agents. We will then have a chance at them. We have already a long waiting list for cars of popular make. Few dealers have room to take old cars in exchange and so for the most part we get them direct from owners."

## Making Winton Motor Carriages



THE WINTON FACTORY  
AT CLEVELAND, O.

IN the entire country there is no better single evidence of the tremendous evolution through which the automobile business has passed in a few years than the factory and the business of the Winton Motor Carriage Co., of Cleveland, O. Six years ago saw Alexander Winton with a half-dozen assistants "building" automobiles in a shop occupying one room in a power building, where he rented space. Today finds Mr. Winton supervising the manufacture of automobiles in a plant that employs from 800 to 1,000 men. Other people were making automobiles 6 years ago, probably just as good automobiles as Alexander Winton's, but today in several cases their names are not to be found in the list of American automobile manufacturers.

Why the success of Winton and the failure of some of the others? A dozen reasons can be suggested—sufficient capital to carry on the work, liberal and intelligent advertising, the building of a practical car that gave comparatively little trouble, liberal treatment of customers, the building of record-breaking cars, attractiveness of design and finish; all these have truly been in Winton's favor, but 75 per cent of the reasons for Winton's success can be summed up in the one word, "system." And this has resulted in the ability to deliver cars when people wanted them; in cars that were mechanically accurate in every detail and did not develop crude spots due to careless construction; in cars whose every part could be replaced at a moment's notice from the factory, the customer having the assurance that the duplicate part he received would take the place of the old without alteration and delay.

Occasionally tradesmen have cast reflections upon the Winton because it did not contain this or that alleged improvement or this or that device which in many cases were merely experiments. Ask Mr. Winton about some of the quickly sprung innovations and he will doubtless admit that they may have their advantages, but, in turn, he will point to a car that is devoid of unnecessary parts, designed for simplicity of operation and maintenance, and above all a car that is interchangeable in every part. He will point to thousands of operators in all parts of the country, and he will cite instances without number of Winton operators who have used their cars week in and week out, in city service and on long country tours, with entire satisfaction. Such results never could have been obtained had the Winton people followed the practice of applying experimental improvements to every new machine as it was brought out. While of course they are constantly carrying on experiments, the experimental department is conducted as a separate institution from the manufacturing end and the experiments leading to radical improvements in the car itself only became operative at the beginning of the season, when a new model is brought

out. In other words, the factory adopts a model after it has been thoroughly tried out and proven practical by the experimental department, and after all its machinery and forces have been organized for turning out that model, the work of producing a predetermined number of machines is carried out in a systematic manner. There is no such thing as "building" a Winton automobile as one considers building a boat or a house. Nine-tenths of the Winton factory is devoted to producing automobile parts. Each man and each machine produces a certain part. Gradually these parts work together to form a complete automobile, but it is not until the door of the shipping room is reached that the Winton automobile is finished.

The brains of a factory may be said to be the offices and the drafting room. The former provides the wherewithal, makes the sales, keeps the accounts, and is the helm by which the entire craft is steered. The drafting room evolves and presents the ideas which must be followed out to produce the desired article.

The Winton offices occupy the ground floor of a two-story structure in the center of the group of buildings, and which is really a part of the paint shop. Suffice to say that the offices are commodious and well arranged and that the same system which pervades in factory proper obtains in every part of the office force. The drafting room occupying the upper floor of the office building is airy and well lighted. An electric blue print machine assures systematic output regardless of weather conditions, and there are ample filing cases for convenient handling of drawings. A fireproof vault insures against loss of valuable

drawings, which, as every manufacturer knows, cannot well be replaced.

The power house, the heart which supplies the mechanical energy for a plant, has been given full consideration by the Winton people. In the original plant it was the intention to operate all machinery by gas engines, but in designing the recent additions it was decided to abandon this method and install a steam and electrical plant of simple capacity, and of the most modern type, with the result that the Winton power house is undoubtedly one of the most efficient layouts to be found in a manufacturing establishment in this country. The boiler and engine rooms are really in separate buildings, the former being at one end of the building containing the foundry, sheet metal and blacksmith shop, while the engine room is in the building containing the experimental shop.

The feed water system has been worked out to a nicety and the amount of water required is remarkably small, resulting in a great saving in this usually expensive item. The initial supply is taken from the city mains and passed to a feed water heater and pumped from this to the boilers; twin pumps performing these operations being arranged so that each can pump either way, and in case one should break down the system could still be maintained by pumping cold water direct to the boilers. An additional boiler feed pump 14 by 10 by 12 inches is to be installed, which will still further improve the system. Steam passes from the boilers to the engines and the hot exhaust steam is then piped throughout the entire group of buildings for heating purposes, portions of it being used in the glue pots, enameling ovens and dryer ovens. The circulation of the steam throughout the buildings and the condensed water is returned to a cistern by means of a vacuum pump in the boiler room.

The equipment of the engine room includes two 200-horsepower Skinner automatic, high-speed, simple engines, and one 100-horsepower engine of the same type. The first two are directly connected to 100-kilowatt Western Electric direct current generators and the small engine is belted to two 33-kilowatt generators. The average load for the entire plant at present is about 225 kilowatts. There are ten



MOTOR AGE

ASSEMBLY DEPARTMENT OF CARPENTER SHOP

motors in various parts of the plant ranging from 25 to 50 horsepower, some of them 110-volt and others 220-volt machines. Both arc and incandescent lights are used in illuminating the plant, double rows of arc lights being used in the larger buildings. The various circuits are controlled from a seven-panel white marble switchboard built by the Western Electric Co. The three wire system is used throughout.

The use of high speed steel for cutting tools has become almost universal in this plant. This is one of the latest developments for labor saving machinery. Several makes of this steel have been tested and the Sylvania steel has been found most satisfactory. Cutting tools from this not only admits of high speed, but the tools remain sharp longer than others. An outline of some of the machine tools in

cylinder surfaces; it planes from two to eleven cylinders at once, according to the surface to be planed. A Lucas Machine Tool Co.'s precision boring mill is used in boring and facing bushings for the speed change box. This must be accurate work, since the meshing of the gears depends upon the accuracy of the bushings. The bushings are sweated together and a special chuck holds them in position while one side is bored and faced. Without clamping the hold or position the chuck is reversed and the piece bored and faced from the other end, thus insuring uniformity of both ends.

A Rivett-Dock thread-cutting tool is used in threading inlet valves. This is a circular cutter having ten teeth, each differing slightly from the next. Ten cuts are required to cut the thread. It could be done in one-twentieth the time on an automatic screw machine, but the thread must be exactly true or the valve will not seat perfectly; hence the slower and more expensive operation. A Little Giant key-seater is used in key seating crank shafts. Key seating for rear axles is done, four at a time, on a No. 3 Brown & Sharpe miller, which is provided with a special fixture. Differential pinions are cut, eight at a time, on a Becker-Brinard, Lincoln miller. A boy operates this tool and produces ninety in 10 hours.

Seven Nos. 3 and 4 Brown & Sharpe universal gear cutting machines turn out thousands of gears at the rate of from three to ten at a time, according to stock, teeth and pitch. Six Dresser-Mullen Co.'s radial drills are used in boring low friction plates. These are produced on automatics and then placed in the radials to get an exact standard. Three No. 5 and one No. 6 Becker-Brinard vertical millers are used in surfacing cylinders and in other heavy surface work; these tools are said



GENERAL VIEW OF THE MACHINE SHOP

Adjoining the boiler room is the gas house. By spraying gasoline through heated air gas is produced. This is contained in a number of large tanks in the gas house and is pumped from there to the retorts in the foundry. Gas is also used for heating the annealing ovens and forges in the forge shop.

The various buildings of the plant are so arranged that raw materials are received at the center of the plant and are distributed in the course of manufacture in opposite directions. Gradually they assume shape, and when they have worked their way back to a central point again they are finished automobiles ready for shipment. Every operation is orderly.

Directly opposite the point of reception is the machine shop. This has an open center span with wings, and the total area is 30,000 square feet. Both the wings and portions of the center are filled with machine tools. In no other portion of the plant is it so easy to discern the secrets of the Winton success in producing a large output of high class interchangeable parts. Every tool in the house is of the most modern style. Wherever it has been found possible to secure a tool that would reduce the cost and increase the possibilities for turning out a certain piece, that tool has been purchased. As much of the machinery as possible is automatic, which accounts for the fact that with only about 200 men in the machine shop and with about 800 in the entire plant they are producing at the present eight large touring cars per day. It is obvious that large plant with ordinary machinery could not produce one car per day from the ground up. Automatic and labor saving tools, combined with system, could only make it possible.



ONE SIDE OF THE MACHINE SHOP

this shop will be interesting to those familiar with machinery. Three No. 3 Cincinnati gear milling machines are used on aluminum parts and drop forged connecting rods; these mill two surfaces at once. Eight No. 3 Brown & Sharpe milling machines are used on steel parts. A Gray 40-inch planer, 36 inches between housings and of 14-foot bed, is used in planing

to be much faster and more accurate than planers for such work.

In boring cylinders there are two operations. The rough work is first done on a Niles Tool Works Co.'s horizontal boring mill. They are then placed in a Binnis Machine Co.'s horizontal boring mill, which is fitted with a special jig and support, by the use of which





FRAME-MAKING DEPARTMENT



ASSEMBLING COMPONENT PARTS

extreme accuracy is obtained. With this the cylinders are ground to gauge to  $\frac{1}{4}$  of 1-1,000 of an inch. With the two tools the workmen rough and finish twenty-two cylinders per hour. Between the two operations the cylinders are submitted to a severe hydraulic test, which develops any flaws in the metal. If a cylinder leaks it is thrown into the scrap pile, no attempt being made to patch the flaws.

Two Prentiss Machine Tool Co.'s radial drills are fitted with special jigs and are used in drilling piston rings. In addition to these drills there are four 26-inch Aurora Tool Works vertical drill presses and a number of small port drills furnished by Strong-Carlisle & Hammond Co., of Cleveland.

A heavy four-spindle drill press with 4-inch head, built by Fote-Burt & Co., is used in drilling connecting rods and front axles, and the same company furnished one three-spindle and one four-spindle lighter machines. These tools work on three or four pieces at once. Twenty-five Hardens & Oliver screw machines make a multitude of small parts which many manufacturers purchase from specialists. The Winton people use so many of these parts that they find it preferable to make them themselves, insuring accuracy and good stock and saving the manufacturer's profit. Among these parts are cap screws, studs, spark plug parts, etc.

There are also several National Acme automatics, which do four distinct operations at a time. These machines are turning out 7,000 differential pistons, six being used on a car; 2,000 inlet pistons, 9,000 adjusting set screws for clutches, 90,000 radiator nipples; eighty being used on a cooler; and 10,000 spark plugs. Packing glands are produced at the rate of 2,500 in 10 hours.

A Brown & Sharpe automatic turns out thousands of spindles for roller bearings. A Cleveland automatic turns cones for the front hubs. These are made from Sanderson tool steel and are tempered in oil and then ground.

A Lodge & Shipley screw machine works on piston rings. This is provided with special tools by which the outer surface is turned and the inner surface bored in the same operation. A Jones & Lamson flat turret lathe turns cam shafts; this is a high speed tool, turning 118 feet per minute with a 3-64-inch feed, using high speed steel.

In boring phosphor bronze pit lushing a special jig is used, by which both sides may be bored without removing from the fixture. This is similar to the one previously mentioned. A Bement-Niles vertical crank grinding machine is used in key seating the crank shafts. All crank shafts, inlet and exhaust valves, inlet pistons, cam shafts, wrist pins, etc., are fin-

ished on Landis grinders, of which there are two No. 11 and one No. 4 models. These have carbondam wheels which revolve at 5,000 feet per minute. A Cleveland Automatic Machine Co.'s worm milling machine turns the worm steering gears, while a Grant Tool Works' worm hobbing machine, fitted with automatic stop and reverse, does the hobbing for the piece which meshes into the worm gears.

In addition to the above tools there are thirty lathes of Davis, Prentiss, Lodge & Shipley, Bradford, Le Blonde and American High Speed makes, ranging from 12 to 36-inch; fifteen small Prentiss 20-inch presses; four Smith & Mills 20-inch shapers; six Bar & Co.'s sensitive drill presses; two Cady Machine Co.'s presses and one E. W. Bliss punch press. On the Cady presses are produced 30,000 radiator fins in 10 hours. These tools are all in the machine shop proper and are stranged along the sides. A single 300-foot line shaft runs the entire length of the shop on each side, each shaft being turned by two 50-horsepower motors, one at each end.

Partitioned off at one side is the tool room, which contains the following tools: Two Greenfield universal cutter grinders, one No. 2 Brown & Sharpe universal grinder, one Becker-Brainard universal miller, two Pratt & Whitney 14-inch tool lathes, one Flatner lathe, two Prentiss lathes, two Lodge & Shipley lathes, two Brown & Sharpe universal lathes, three Whitney millers and one Gishbold lathe. In the center is the stock room for tools and adjoining this is the stock room for small finished parts.

In one corner of the machine shop is the tire room and wheel assembling room. An immense stock of tires is kept on hand. In this room also the spark plugs are assembled. Platinum tips, worth their weight in gold, are soldered in and then each plug is tested, under conditions the same as are found in a standard car. Adjoining the main floor of the machine

shop is the private office of Edward O'Hagan, foreman of the department. Under him is a staff of inspectors who inspect every part produced. In another corner is a stock room for raw material used in the machine shop. The material is in racks or bins, each properly tagged.

The tin shop and sheet metal department are in a room 125 by 80 feet adjoining the boiler room. The work in this shop is largely bench work. Sheets of copper and tin are cut and formed into proper shapes and soldered into tanks and other parts. Copper pipe is cut into correct lengths and formed into the shapes required for the various lubricating lines. The construction of the radiators is an interesting process. There are forty tubes in each radiator, with sixty-five flanges on each tube. Small boys slip the flanges onto the tubes and screw in the brass nipples. A fireproof wing at one side of the room contains a dip soldering outfit and a man is kept constantly busy dipping the flanged tubes, which are brought in on racks. Two large gas brazing outfits are used in brazing rear axles and differentials and the supports for canopy tops. The flanging of these parts is also done in this room. One corner of the room is partitioned off for a polishing room. This is well lighted and well arranged. The dust from the polishing machinery is carried off by a ventilating system. In this room are also tumbler for finishing numerous small parts.

The blacksmith shop and foundry occupy the remainder of the large building, which is practically the same size as the machine shop and parallel with it. In one end of this room there are seven blacksmith's forges and here numerous small parts are forged and welded by hand. A Brown & Sharpe forging outfit, using gas as fuel, is utilized in welding front axles and steering gear parts. The heat in this forge is terrific and it admits of much faster work than forges using coke as fuel. Adjoining the forge is a Bement-Niles steam hammer, supported on a concrete foundation. It strikes a blow of 800 pounds and is used in forging heavier parts.

A large force is employed in the core making room, as the Winton company makes practically all its own brass, aluminum and iron castings. At one side of the room are gas heated ovens for hardening the cores after they are formed by machinery and hand. The parts are wheeled into the ovens on racks so that little handling is required. Adjoining the oven on one side is an annealing and case hardening furnace, also operated by gas. On the other side of the oven is a row of twenty retorts for melting brass, aluminum, iron and other ma-



TIRE ROOM

THE TIRE ROOM

terials for castings. These are operated by gas under high pressure.

The assembling shop is 200 by 125 feet, at right angles with the machine shop and the forge, foundry and tin departments, so that parts may be taken directly to this department without having to pass through others. Around the sides of this room are numerous benches, where a large number of men are employed in assembling carbureters, transmissions, hubs and other parts which go into the car as complete units. These parts, after being assembled, are taken back to the stock room in the center of the machine shop. The men doing this work are termed the feeders and in reality they are not a part of the general assembling scheme. The cylinders are brought into the assembling room in two sections. These are bolted together and then the valve seats are ground to accurately fit the valves. The gears are fitted in and then the circulating pump and oil pumps are put in place.

The cylinders are then hung in the frame. In drilling the holes for hanging the cylinders an electric drill is used. This is on wheels and is provided with flexible connections and flexible transmission, so that it may be used over a considerable radius. After the frame has been hung the muffler, cooler and lower water connections are installed. Up to this point the work has been done by different individuals, each performing a certain operation. It is here that the men known as assemblers start their work. Two men assemble each car. They are given a written order on the stock room for a complete set of parts for assembling one car, and they are in charge of a certain car until it has been given its preliminary testing out. After all the parts have been put into place the machine is started to see that it will run. The time required for assembling the car up to this point by the two men is about 15 to 18 hours. The assemblers work entirely independent of other crews performing the same work, so that the chassis are completed at different times and a constant stream of machines is being finished for the testing process.

The completed chassis is hoisted by an electric traveling crane which covers the entire building and is placed on a testing truck. By means of this truck the chassis is carried to a testing brake and coupled to the latter by the chain to be used on the car. The brake consists of a large disk with a friction band, which is controlled by a screw and wheel and with a scale balance, designating the power exerted by the machine. The test not only gives the maximum developed horsepower, but



MOTOR AGE

THE FOUNDRY

the actual horsepower under conditions similar to those encountered on the road. Each machine is run under a heavy load for 6 hours; 3 hours on high speed, 1½ hours on low speed and the same time on reverse. The machine is then carefully inspected and if all right is sent to this running gear department, where wheels, axles and steering gear are fitted. This work is done over pits. A temporary body is fitted and the car is then given a 15-mile run on the ¾-mile board track which surrounds the plant. After being given this test, wheels and running gear are carefully wiped off and the body in a partially finished condition is installed.

The arrangement and equipment of the assembling room have been carefully planned. There is little or no confusion because the men remain in the same place practically all the time. Certain men are employed in moving the various parts and complete machines, and it is done in an orderly manner. In addition to the electric crane, previously mentioned, there is an overhead carrier system for handling heavy parts, as well as a portable crane on a truck, used in assembling cylinders. About 215 men are employed in the assembling room and eight cars per day are now being assembled. The department is in charge of M. F. Hayes.

For convenience the frame building department occupies one end of the assembling room, and in reality is a part of the assembling department. The Winston frame is all steel and the sheets and angle bars are delivered in the required length and size. Riveting holes are made by drill press or by cold punch, according to size, and riveting is done in presses.

A splendid large building is devoted to the wood working department, where car bodies and other wood parts are made. This building is located at the extreme north end of the plant, measures 200 by 168 feet, and has a

center span 200 by 80 feet, unobstructed by supports. The center is devoted to the assembling of bodies, while the machinery is located in the wings. The wings are two stories high, the balconies being used for the storage of lumber. The company uses great care in the selection of lumber and it buys only well seasoned ash and poplar. The lumber now being used was purchased early last summer and has been in lofts since that time. If lumber is slightly damp when received, or if certain planks do not seem to be thoroughly seasoned, they are placed in large steam heated drying kilns, located at one end of the building, and allowed to remain there until thoroughly dried.

The machinery equipment includes planers, shapers, boring machines and mortisers. A prominent feature is that all sawdust and shavings from machinery as well as hand work are carried out of the building by a system of blowers, connected with every piece of machinery, also having openings in a number of places where shavings may be swept. The air in the building is devoid of the dust usually found in such a plant. The line shaft in the building is driven by a 30-horsepower motor, while a 25-horsepower motor, suspended on a shelf, drives the blower system. The blower system terminates in a towerlike building outside. Wagons drive underneath and shavings or sawdust are fed into them by gravity.

All the work is laid out with patterns, and pieces are cut out with hand saws. The side of all bodies are one piece and each seat is one piece of veneered wood. At one side is a glue and press room, partitioned off. This is provided with presses for veneering and holding glued pieces, and in the center of the room are the glue pots, which are heated by steam from the main steam line. J. P. Burkholder is foreman of this department, which employs 140 men.

From the wood working shop the body goes to the paint shop, where it meets the assembled chassis. The paint shop is a building 300 feet long and has the office building in one corner of it. It embraces 40,000 square feet of floor space and is divided into several departments. From twenty-four to twenty-six operations are required to paint and finish a Winston car body and from fifteen to seventeen coats, according to color, are used. This year the Winston company is furnishing three standard colors: the Winston maroon, a Brewster green and a canary yellow, the lighter color requiring two more coats than the others.

After the car has been divested of the testing seat the chassis is painted with aluminum bronze, with maroon striping. The frame is



MACHINE DEPARTMENT OF CARPENTER SHOP



GENERAL VIEW OF CARPENTER SHOP



WINTON AGE

THE REPAIR DEPARTMENT

then enameled black, striped and decorated. The upper body is then placed on the car.

The body, after coming from the wood working department, is given a priming coat and then a coat of lead. It is glazed with putty and then given a coat of flat lead. After that it is given six coats of "rough stuff," or body filler, and is then ready for the guide coat. The body is then rubbed with lump pumice and given three coats of color. Next come three coats of rubbing varnish, each being rubbed with pulverized pumice stone. It is then rubbed to a smooth finish, after which it is given a

200 by 50 feet, which is combined with the shipping department. The trimming section is divided into two rooms, one containing the cutting and sewing departments and the other the leather and upholstering departments. Enameled trimming leather is used and this is delivered in large rolls. It is cut according to patterns and goes to the sewing room to be stitched. Here are employed about a dozen girls, the only women in the entire plant, not even excluding the office, where no women are employed. The various stitching machines are operated by individual motors, the girl simply turning a switch in handling the machine.

In the leather room are leather erasing machines and sewing machines for insuring even thickness of the leather. After leaving the sewing room the pieces go to the bench hands, who upholster the backs and cushion tops, using long white hair drawings. Then the seat workers complete the job.

After being upholstered the bodies are returned to the paint shop for the final finishing coats, after which the complete car is returned to the finishing room to be fitted with the canopy top, aprons, hoods, etc.

Then the car goes into the shipping room, and even here work has to be done before the car is ready for the purchaser. Lamps and

or rebuilt without interfering in the slightest degree with factory production. The repair factory includes a machine shop, assembling department, wood working department, paint and varnish department, upholstering department and a stock room, which contains duplicate parts for every Winton model, from the earliest model to the 1904 touring car.

In the building containing the engine room is the experimental shop, also a comparatively complete factory in itself. Few outside those actually employed in this shop have ever seen the inside of it. While the shop is devoted largely to developing new models, racing cars in particular, being the home of the two latest Bellets, it is also a testing department, where all materials entering into the construction of the car are tested before being accepted; as well as a department in which are designed many special devices and appliances that will tend to improve and simplify the processes employed in the various factory departments.

Mr. Winton supervises the work of the experimental department and spends a great deal of time there. L. Melanowski, mechanical engineer for the company, assists Mr. Winton in the experimental work and has under him a number of experts who are constantly at work developing new ideas. Mr. Winton also super-



CUTTING AND SEWING IN FINISHING DEPARTMENT



WINTON AGE

UPHOLSTERING—FINISHING DEPARTMENT

coat of finishing varnish. The wheels are given about the same treatment and are stripped in the last rubbing coat. When the body seat and tonneau are in the last coat of rubbing varnish the seat and tonneau go to the trimming department and the body to the assembling department, after which they are returned for the final rubbing and finishing varnish. Fenders are given about the same treatment as bodies and after each coat they are placed in racks which extend to the ceiling, each body taking 27 days to go through the painting and finishing process. One prominent element in the success of these operations is the dust-proof varnish rooms. One, 150 by 30 feet, is devoted to rough finishing, this department being provided with cement floor; while the finishing varnish room is 30 by 300 feet, covering one entire side of the building.

The canopy top stanchions, springs and various other iron parts are treated to several coats of enamel, each coat being baked on. Three large gas heated enameling ovens occupy a space between two of the departments. Before being enameled the springs, which are among the very few articles not manufactured by the company in its own shop, are treated to a hot lye bath, in order to remove a coating of rust preventative. The paint shop employs 150 men, in charge of Fred H. Kroeger.

The trimming department occupies a building

horns are fitted and then removed. The canopy top is taken off and the entire machine covered with muslin; if for foreign shipment it is securely boxed. The shipping room floor is practically level with the freight car floor; a switch from the main line of the Lake Shore & Michigan Southern railway. Three machines are usually shipped in a freight car. The wheels are blocked by pieces of wood 3 by 8 inches; cut on a bevel, and on each side of each wheel is placed a strip 3 feet long and 1 foot high. In this way the machine is securely blocked against any possible movement in transit. The lamps, horns, etc., are boxed and the canopy top is placed at the side of the machine and securely fastened to the car wall.

At the extreme south end of the plant is a building 200 by 125 feet, which is practically a complete automobile factory in itself. This is the repair department. A Winton car leaving the plant never sees it again. The various branch stores in the larger cities are equipped with repair shops, but if a car is so seriously damaged that it cannot be repaired at the branch, it is shipped to the Winton repair department. A large portion of the work carried on in this shop is in rebuilding cars for owners who desire the up-to-date improvements. The great advantage of such a shop is that any Winton car ever manufactured can be repaired

vises the work in all departments of the factory. Jacob F. Weidig, who has been with Mr. Winton almost since the first car was built, is superintendent. Thomas Henderson, vice-president of the company, exercises a general supervision over the purchase of machinery and supplies, and it is due largely to him that the equipment of the big plant is of such excellent quality. George H. Brown, secretary and treasurer, has practically the management of the business affairs of the company in his hands. This year he relinquishes all work in connection with sales to Charles B. Shanks, whose close attention to business has advanced him in a few years from a minor office position, first to the conduct of Winton advertising, then to the management of the Winton depot in Cleveland, and lately to his present office. Mr. Shanks retains his supervisory over advertising, but has an efficient assistant in Charles W. Menrs, formerly editor of Cyclopedia Gazette and Motor Review, and who is now mainly responsible for Auto Era.





## VIRGINIA'S FINE BEACH

### Pronounced Better Than the Florida Course and Big Meet Is Looked for During Next May

New York, Feb. 21.—Leo Straus, of the F. A. La Roche Co., who has returned from a visit of inspection to Virginia beach, in the interests of the race tournament to be given there by the Virginia East Coast Association, pronounces the beach undoubtedly available for automobile speeding, is sure a nearly rival to Ormond has been found and prophesies a great meet there next May. Mr. Straus pronounces the reports of the existence of gullies and soft spots to an extent to interfere with straightaway racing and time trials to be unfounded.

"We went over 20 miles of the beach in three automobiles—an Olds, a Cadillac and a Long Distance," said Mr. Straus, "and found a magnificent stretch, undoubtedly fit for speeding. The wheels of our machines made no impression whatever in the sand. We saw the beach under very unfavorable conditions. The life saving people and the natives say it has been a winter of continuous storms, and so the beach is more 'wavy' than it is normally. The warm May sun will dry out and improve the course. There is some wreckage, which by a match and a little dynamite could be cleared at an expense not to exceed \$50. There is a good straightaway stretch of 50 miles from Virginia beach to Oregon inlet where available racing surface varies from 150 to 300 feet in width. The formation of the beach is favorable, for it is not at all slanting, as has been said, and no soft spots were found. The beach runs as straight as an arrow for over 90 miles. W. Erby Smith, superintendent of the government telegraph and telephone system, a man who has been for about 25 years active in government work from Cape Cod to the southernmost point of Florida, assures me that there is no point on the coast where as hard and as continuous a course as this may be found. Wires, which will be available for the timing apparatus, are already up.

"The Virginia East Coast Automobile Association has for its nucleus the Norfolk Automobile Club. Its membership is made up of automobilists from Norfolk, Portsmouth, Berkeley and other towns in the vicinity. Virginia beach is 16 miles south of Norfolk, and is connected with the latter by a fine shell road. A trolley line makes the run in 35 minutes."

It is proposed to have 5 days of racing, to be followed by an open-air show, utility tests and a floral fete. In other words, it is proposed to give southerners an all-round demonstration of the possibilities and the practicality of the automobile.

There is already talk of the elimination trials for the American team in the international cup race being run at Virginia beach, instead of Ormond, owing to the accessibility of the former and the likelihood of very hot weather at the latter course in April.

### TRYING TO CLIMB MT. SNOWDON

A plucky attempt was made recently by Harry du Cros, Jr., and Charles Sangster to climb Mount Snowdon in England. The height of Snowdon is 3,560 feet above the sea level and it is the highest mountain in England

and Wales. The climb was made January 27 with a 15-horsepower Ariel car. The only possible route was over the Snowden mountain railroad, and even over this the difficulties were enormous. The last train was run over the road in October and the ballast had not been cared for since that time, so that the floods and rains had cut deep gaps in many places. The car had to be lifted over several of these.

Because of the unusual bad weather the attempt covered 2 days. The first day took the car to Halfway Station, midway between the base and summit of the mountain, and Clogwyn, the last station from the top, was passed on the second day. Beyond Clogwyn a gang of men was employed to remove the snow, but at the last ridge a block of frozen snow which had drifted to a depth of about



MOTOR AGE

CLIMBING SNOWDON

30 feet effectually prevented further progress. After a height of 800 feet was reached the dense fog prevented the explorers from seeing the top of the mountain. At times the wheels were within a few inches of a sheer drop on both sides of several hundred feet. Great difficulty was experienced in making the driving wheels set on the steep incline because of the flat, slaty composition of the ballast, which was scattered in all directions as soon as power was applied to the wheels. This handicap was partly overcome by winding chains around the wheels.

The average grade was about 16 per cent, and the loose ballast made this much more difficult to overcome. Another attempt will be made to climb the mountain as soon as the weather becomes more favorable.



MOTOR AGE

THE END OF THE CLIMB

## TO HAVE COUNTRY CLUB

### Members of the A. C. A. Plan Modern Establishment Well Out On Some Long Island Road

New York, Feb. 21.—The project of the establishment of a country club by way of an objective point for short rides from the city is being agitated by the A. C. A. and meets with an enthusiastic reception. Already a committee consisting of T. M. Hilliard, Emerson Brooks and Homer W. Hedge has been appointed and is sounding the members informally on the suggestion. A circular letter is to be sent the members this week asking for their views in the project and as to their preferences for a location for the house as among Long Island, Westchester and New Jersey.

The chairman of the committee, Mr. Hilliard, says of the fifty members interviewed forty expressed a preference for Long Island; that Westchester came next in favor and that few favored New Jersey owing to its convenience of access. The argument in favor of Long Island was that it was easily reached by the Astoria or Long Island ferry without a long ride through city highways. Besides, many of the members belong to the Long Island fashionable colony and occupy their country residences a great portion of the year.

The present idea is not to establish an extensive club house with vast and costly surroundings, but rather to secure a comfortable farm house, which may be made the objective point of a ride and where a member may have a smoke, a drink and a bite to eat before his return journey. It may be possible to lay out a golf course and tennis courts. If a water front can be secured so much the better. If not, it is said that probably boat house and dock privileges can be obtained for the convenience of members owning motor boats, twelve of which are reported to have been already ordered by members.

The question of expense, however, will not stand seriously in the way if assurance be received of a general demand for a country club and its extensive use by the members. The surplus in the club's treasury from its initiation fees and dues has been largely increased by the club's share of the Madison Square garden profits.

Already there is talk of an amendment to the by-laws providing for a larger membership, the present limit of 400 having been reached and there being even this early since its expiration a waiting list of twenty-one.

G. O. Shields, president of the League of American Sportsmen, gave a lecture at the club on Tuesday evening on "Timber That Grows at Timber Line."

### BIG TOUR TO ST. LOUIS

New York, Feb. 21.—President Whipple and other officials of the A. C. A. have returned from the Chicago convention and have begun work along the new lines of endeavor there determined upon—a great converging tour to the St. Louis exposition, the establishment of reciprocal privileges among members of A. A. A. clubs and the formation of a bureau of information as to competent chauffeurs.

The board of directors will meet in this city in March. At this meeting the personnel of the racing board will be announced. A meeting of the racing board will follow shortly.

## HUB HUSTLERS ARE HAPPY

**Boston Agents and Managers Celebrate Washington's Birthday with a Grand Spring Opening—Old Bicycle Custom Is Revived with a Profusion of Flowers and Geniality**

Boston, Feb. 22—The majority of the automobile dealers of this city are today, the natal day of the father of his country, holding open house and entertaining the hundreds who are in search of information as to the latest things in automobile construction. The idea is one appropriated from the day when bicycling was in its glory, and custom decreed that every local cyclist of note should make a pilgrimage up the avenue. There is one great exception in the custom, however, and that is that the automobile dealers are not today appealing to the friendship of their visitors through the presentation of cigars and other souvenirs. They consider the automobile business above that standard and are talking good sound business.

At the Winston garage on Stanhope and Berkeley streets Harry Fosdick entertained his visitors in his usual hospitable manner. Although Mr. Fosdick has increased the storage capacity of his garage he is still in need of additional room, and possibly he will hereafter be forced to protect his own interests by declining to look after cars other than those made by the Winston company. The garage is unquestionably one of the best to be found east of New York city and its shops and offices are finished in an up-to-date manner.

The long line of Pope products was displayed by W. E. Eldridge at his establishment on Columbus avenue, and here one gained some idea of the vast interests of the Papes in the automobile line. The Pope-Toledo, Pope-Waverley, Pope-Hartford, Pope-Tribune, the Cadillac and the Pope line of bicycles were all displayed in an attractive manner. The Pope company is still looking for a garage suitable to its uses, and although it now possesses one such as would be considered ample for many it is not equal to the task of caring for the storage business of this concern.

Alvan T. Fuller displayed a line of North-ends and Orients at his Columbus avenue salesroom, but he greatly regretted his inability to show his latest car, the Packard. Mr. Fuller had anticipated receiving his Packard stock car, but it is still lacking, much to the regret of himself and Mr. Ross.

Fred Randall was proud in the possession of his Stevens-Duryea, the Clement and the Indian motor cycle, which made a formidable trio, which attracted no end of attention.

Ben Smith, with his long line of Oldsmobiles, was equal to the occasion, and during the day he, too, entertained his share of visitors.

The Reed-Underhill Co., with its recently remodeled establishment on Stunhepe street, dwelt upon the fine qualities of the "waterless" Knox, displaying the latest models, and also a delivery car which has done good work in driving through the heavy snows of this winter.

The Lewis & Mathews Co. made a feature of the Decauville car, for which it is New England agent, while next door to it the Electric Vehicle Co. had a fine collection of electric, as well as models of its Columbian gasoline cars. Kenneth Skinner was also ready to do business either in the de Dion or

the Boyer car, with both of which he is meeting with considerable success.

Coming back to the avenue one found Mr. Gilmore of the Rambler doing considerable missionary work, and displaying a long and varied line of the cars which made an enviable record on the trip to Pittsburgh last year. The remodeled Grout steamer was displayed at the Boston office of the Grout Co., while next door was to be found the new Cameron car displayed by A. E. Coburn & Co.

Mr. Morrison, of the Peerless Co., did not keep open house, he contending that his men were entitled to all the pleasure to be derived from a holiday.

Several new steamers were displayed by George H. Lowe at the headquarters of the White company on Tremont street, while across the road on Berkeley street, J. H. MacAlman held forth in all his glory surrounded by friends and visitors who came to inspect the steamers and gasoline cars turned out by the Locomobile company.

Manager Henshaw, of the New England branch of the E. R. Thomas Motor Co., has been doing extensive missionary work with the new Thomas "flyer" demonstrating car. Hard winter runs have been negotiating practically every day and Mr. Henshaw is jubilant over the prospects of the new three-cylinder car.

H. H. Buffum & Co. have secured a salesroom on Boylston street in close proximity to the Massachusetts Automobile Club house, where they are to display both their automobiles and their motor boats.

During his recent trip to the Chicago and Detroit automobile shows Manager Campbell, of the Boston exhibit which is to be held in Symphony Hall the week commencing March 14, was surprised at the great interest displayed in this latter show. Mr. Campbell was informed by many western manufacturers that they personally will be at the show during the week. He was the recipient of several applications for space, which, even with the additional rooms secured in the motor boat show in Horticultural hall the same week, he was unable to accept, as every inch of the space in both halls has been disposed of.

The show committee is now endeavoring to make arrangements with the passenger association whereby excursions can be run from the larger cities of New England to Boston during the week of the exhibit, which plan, if perfected, will bring many out-of-town automobilists to the show.

In the motor boat exhibit in Horticultural hall will be found some of the leading motor boats in this country; boats made famous by their past and prospective victories, two of them having been matched to race for \$1,000 a side on the Hudson river early in May, the F. I. A. T. and the Vingt-et-un.

### MINNEAPOLIS DEALERS ORGANIZE

Minneapolis, Minn., Feb. 22—Minneapolis automobile dealers will start the season this year with a definite understanding as to trade conditions. A trade association has been formed

comprising every dealer in the city and several rules have been laid down which will be strictly adhered to. The dealers have fixed upon a standard rate for storage; have determined to accept no old machines as part payment on new cars; have settled upon discounts, and have determined to unite forces to secure a wider margin of profit from the manufacturers.

The association is known as the Twin City Automobile Dealers' Association, although as yet there are no St. Paul firms enrolled. The membership consists of the following: Hayes Automobile Co., Pence Automobile Co., A. C. Bennett, E. H. Moulton, Jr., Northwestern Motor Vehicle Co., Great Western Cycle Co., Winston & Walker, Dr. C. E. Dutton, A. F. Chase & Co., Strong Automobile Co., Walter G. Benz, J. L. Menard.

While the association was formed primarily to put the trade upon a firm basis and prevent any demoralization of rates or conditions, it will make itself felt during the season by its efforts to improve the existing conditions in the northwest. Good roads, legislation and race and exhibition meets will be dealt with by committees from the association.

The chauffeurs of Minneapolis have followed the tradesmen by organizing an association for their own benefit. The club is formed for the purpose of bettering the members along mechanical and technical lines, and it will affiliate at once with the American Motor League. The membership of the club will be limited to the professional chauffeurs of the city and an effort will be made to secure the assistance of the automobile club and the association of automobile dealers in working along lines for the benefit of the industry and the sport. The club will probably be known as the Minneapolis Motor Car Club.

### WANT THE FLEET CUT

St. Louis, Mo., Feb. 23—The members of the St. Louis Motor Cycle Club are making a strong protest against the ruling of License Commissioner P. J. Clifford that two-wheeled motor cycles shall pay as much license as four-wheeled automobiles. Attorney John C. Higdon, president of the club, is leading the fight. The annual tax on automobiles is \$10, and the motor cyclist is now compelled to pay the same amount. A bill was introduced in the house of delegates a month ago reducing the tax on motor cycles to \$2 a year, but so far there has been no action taken on it. In speaking of the matter, President Higdon said:

"It is not fair to charge as much license for a motor cycle as for an automobile. There is as much distinction as there is between a buggy or wagon and a bicycle. The motor cycle has but two wheels and takes up no more space than a common bicycle. In New York the license of but \$1 per year is charged. St. Louis riders are more liberal than the New Yorkers and have agreed to pay \$2. As ordinance to this effect is now pending in the house of delegates and it should receive the hearty support of all honest lawmakers."

### SECOND COLONY POSSIBLE

Chicago, Feb. 24—The Orlando F. Weber Co. removed this week from 521 Wabash avenue to 390 Wabash avenue, next door to the Studebaker Bros. Mfg. Co. The new location has a frontage of 40 feet and will be flanked on each side by an automobile store, so that the nucleus of another automobile colony is formed. Several sales made by the Weber company since the show at the coliseum have

been to persons who viewed the exhibit there, and may be considered the fruits of the work done during the show week.

D. M. Lord, senior member of the firm of Lord & Thomas, advertising agents, retired from active business life last week. He will be succeeded in the presidency by Mr. Thomas, who will continue in the active management of the business, as he has done for several years past.

Edwin S. Day has been appointed by Judge Tullih to take charge of the affairs of the Chicago Motor Vehicle Co. The appointment was secured by Jonathan P. Primley and Henry W. Hoyt, who allege that there is a scheme to divert the assets of the company from their proper channel. Primley and Hoyt declare that the Monarch Railway Co., capitalized at \$2,000,000 under the laws of Maine, was to be a means of defrauding them and other creditors of the company.

Charles H. Tucker, manager of the Chicago branch of the Winton Motor Carriage Co., has been in Cleveland the past week arranging for the spring campaign.

The Auto-Bi, manufactured by the E. R. Thomas Motor Co., will be sold in Chicago this year by C. A. Coey & Co., distributors of the Thomas car.

The Ralph Temple & Austrin Co., of Chicago, changed its name to the Ralph Temple Automobile Co. last week, as explained in MOTOR AGE a few weeks ago.

#### CAPITAL SHOW PROMISES WELL

Washington, D. C., Feb. 20.—The Washington show, the fourth annual one of the Washington Automobile Dealers' Association, is just a month off, and the trade is getting everything in shape for the affair. The following firms have taken space to date: Pope Mfg. Co., Woods Motor Vehicle Co., F. A. La Roche & Co., Cook & Owensney, Automobile Storage & Repair Co., Charles E. Miller & Bro., Edison Automobile Station, Washington Electric Vehicle & Transportation Co., Saks & Co., National Electric Supply Co., Cadillac Automobile Co., A. L. Cline & Co., Knox Automobile Co., A. Ward Chamberlain, Rose Mfg. Co. and William Hjorth.

The past week marked the retirement of the Willard Automobile Station from the local field. The concern was incorporated about a year ago to do a general automobile business at the corner of Fourteenth and C streets. Several prominent business men were the incorporators and A. L. Kull was the manager. The concern was appointed agent for a number of cars and did a nice business for a time, but a slump came and it was finally decided to dissolve the corporation and give up the business. A. L. Kull has entered into partnership with W. Leslie Edison to conduct the Edison Automobile Station. Announcement has been made that they have secured the agency for the St. Louis, Ford and Royal Tourist cars and will make a bid for trade.

The statement in the last issue of MOTOR AGE to the effect that the Potomac Electric Power Co. had obtained a judgment against the Edison Automobile Station for \$63.54 was an error. The judgment in question was obtained against the Edison Automobile Co., which was recently merged into the District of Columbia Automobile Co.

The Central Automobile Co. has removed its garage from Sumner Court to 1126 Connecticut street, a large building formerly occupied by the Locomobile Co.

## ILLINOIS WANTS ROADS

### Chicago Automobile Club Names a Committee To Carry On the Work—License Matters

Chicago, Feb. 23.—President John Farson, of the Chicago Automobile Club, has appointed Sidney S. Gorham, counsel for the club, as chairman of the good roads committee. This committee will at once take up the work of forwarding the good roads movement, and will make the influence of the club felt. A bill will be prepared and presented to the legislature in case any legislation is desired. When asked for an outline of the committee's plans Mr. Gorham said:

"The other members of the good roads committee have not been appointed. It is the purpose of the club to assist in securing better roads for Chicago and the state of Illinois and to co-operate with the American Automobile Association, the American Motor League and other organizations having as one of their objects the securing of better roads throughout the United States, in urging the passage of the Brownlow bill by congress, and the enactment in Illinois of such legislation as will best provide for the improvement of our roads. The bad condition of many of our streets in Chicago is due to the system now in force of paying the cost of street improvements by special assessment of contiguous property. This particular difficulty is not experienced in the building of country roads.

"We hope to make the Chicago Automobile Club a factor in the promotion of good roads, a subject which is now attracting attention all over the country. If the Brownlow bill is passed Illinois will be entitled to \$1,398,000 of a total appropriation of \$24,000,000 provided for in that bill.

"If any legislation is needed in Illinois in order to secure the benefit of our share of this appropriation I understand it will be the duty of our committee to draft a bill and present it to our state legislature. In that event the active support and co-operation of every member of the club is confidently depended upon.

"The good roads movement is a popular one and will doubtless be an element of no small importance in the coming state and national elections. We believe that as soon as the club has paved the way we will have the support not only of automobile owners but of the farmers and of every public spirited citizen. While our country is new, it is old enough to be ashamed of the condition of its roads and it is high time better roads were built."

The city of Chicago has filed a petition for a rehearing in the Bauser case, which was recently decided adversely to it in the Appellate court. The city, in seeking to uphold its right to license and examine automobile operators, asks the court to take notice of the facts that an automobile is a dangerous machine and that public safety requires that the machines be operated by competent persons. Corporation Counsel Tolman in the petition says: "A safe automobile becomes an engine of tremendous danger in the hands of an incompetent operator. The character of the machine therefore is of no greater importance than the character of the man behind the lever, and the right to determine the fitness of the one implies the right to determine also the fitness of the other. The court surely will not hold that a person

deficient in vision or hearing or with no knowledge of the powerful mechanical appliance entrusted to his care would be a proper person to operate a 60-horsepower automobile in the crowded streets of Chicago."

An injunction has been issued by Judge Honore restraining the city from enforcing the ordinance requiring that automobiles be numbered, that operators wear badges and that operators be licensed. The action was brought by the Woods Motor Vehicle Co.

The directors of the Chicago Automobile Club have changed their regular meeting day from Tuesday to Thursday of each week. The membership of the club is growing rapidly, and over two dozen applications are now on file to be acted upon at the next meeting. The coliseum show was a great impetus to the club, and much of the increased interest is attributed to the enthusiasm stirred up during the week of the show. The prophecy of President Farson that the club would have a membership of 500 before the year is over seems probable now of fulfillment. Frank X. Muld will represent the club at the elimination trials of the Gordon Bennett race. These trials will be held on the Virginia coast about Easter week.

#### COMMERCIAL TESTS ARRANGED

New York, Feb. 21.—There is little to add to the details of the proposed commercial vehicle service test to be promoted by the A. C. A. during the 6 days of April 4 to 9 in this city, which were set forth in the telegraphic dispatch published in MOTOR AGE this week. The official announcement of the list and its conditions follows:

The test will be open to motor wagons used for commercial purpose made in the United States or abroad. The classification will be on the basis of dead load carried, all wagons of like weight, whether steam, gasoline, or electric, to operate in the same class. The following classes have been established:

- 1.—To carry a dead load of 1,000 pounds or under.
- 2.—To carry a dead load of 1,000 to 2,000 pounds.
- 3.—To carry a dead load of 2,000 to 3,000 pounds.
- 4.—To carry a dead load of 3,000 to 4,000 pounds.
- 5.—To carry a dead load of 4,000 to 5,000 pounds.
- 6.—To carry a dead load of 5,000 to 6,000 pounds.

With a view of holding a more thorough and practical test than has heretofore been afforded, the wagons will be placed under actual working conditions in the service of the American Express Co. and the Western Express Co. for one week from April 4 to 9 inclusive, and will transfer and deliver merchandise, produce, baggage, etc., from the various depots of these companies during the entire week.

Awards will be made in each class for the best performance, based on the economy of operation in time and fuel, ratio of paying load, ton mileage, and general reliability and availability for service.

#### NEW CARRIER LAW ON GASOLINE

Washington, D. C., Feb. 19.—Representative Loudenslager, of New Jersey, has introduced a bill in congress to amend the act to amend section 4472 of the revised statutes so as to permit the transportation by steam vessels of gasoline and other products of petroleum when carried by motor vehicles when used as a source of motive power, so that the provision in said act which directs that all fire, if any, in such vehicles be extinguished before entering the said vessel and that the same be not relighted until after the vehicle shall have left the vessel, be amended to read as follows: "That all

fire, if any, in such vehicles or automobiles be extinguished immediately upon boarding said vessel and that the same be not relighted until each and every vehicle, animal and passenger shall have left the vessel. Provided, that such vehicles or automobiles and their occupants shall be the last to board the vessel." The bill was referred to the committee on interstate and foreign commerce for action.

#### NEW BILL WILL PASS

Albany, N. Y., Feb. 18.—The Hill-Cocks automobile bill was favorably acted upon today by the assembly committee on internal affairs, but a few amendments were made. In regulating the registration and identification of motor vehicles and their use on highways the bill expressly states that the law shall not apply to motor cycles. The speed on bridges and dams is limited to 4 miles an hour. In case of accident the motor must be stopped and, upon request, the owner of the car must give his name and address.

Local authorities are not permitted to pass local ordinances affecting the registration or number of motor vehicles or prescribing a slower rate of speed than specified in this law. Fines for violations shall be not less than \$25 and not exceeding \$50 for the first offense.

#### BUFFALO CLUB AND TRADE

Buffalo, N. Y., Feb. 22.—The Buffalo Automobile Club, although the largest and one of the most prosperous of American automobile clubs, is also probably the most remarkable for its modest dues, which are only \$5 per annum. The \$5 not only covers membership to the club, but also to the New York State Automobile As-

sociation and the American Automobile Association.

The Buffalo automobile show opens 2 weeks from today and as the majority of the local agents do not expect their samples shipped by the factories until this week there will be considerable anxiety as to whether the cars will all arrive in time, as the freight traffic is much congested.

Gus G. Buse, the White and Northern agent, has formed a company which will hereafter be known as the Gus G. Buse Auto Co. It has secured a desirable location at 222 Pearl street and will have a well equipped garage.

The Ripper Motor Carriage Co. closed for the Glide agency at the Chicago show.

The Buffalo tradesmen who visited the Chicago show were much pleased and almost without exception claimed the Chicago show equally as good as the Madison Square garden exhibit.

#### HOT AFTER GLASS THROWERS

The Pittsburg, Pa., consulate of the American Motor League is taking hold of league work with a vim worthy of emulation by the consulates in other cities and towns. The Pittsburg organization has been formed only a short

time, but it has already done some effective work and is making itself felt by its energetic labors. One of its latest moves was the issuance of a large poster offering a reward of \$5 for information leading to the arrest and conviction of any person violating the following city ordinance: "Any person who shall put, place, deposit or throw any broken glass, crockery, china-ware, cuttings of tin or sheet iron, nails, hoopknives or other articles calculated to maul, bruise or maim man or beast, on or into any public street or highway in the city of Pittsburg, shall pay a fine of \$5, to be recovered summarily before any alderman of the city of Pittsburg." The consulate is growing each week, the officials having, by their own hustling, surrounded themselves with a force of earnest workers.

#### WILL USE 32-HORSEPOWER CAR

Syracuse, N. Y., Feb. 22.—C. Allen Hayden, of New York, came here during the week and made arrangements for the manufacture of a 32-horsepower car to carry two persons. Mr. Hayden will use the car in touring the British Isles and Europe during the coming spring and summer. One of the principal conditions of the contract is that the machine must be able to travel at least 50 miles an hour. Mr. Hayden wants a rig which can compete with any he happens to meet on the road. When completed his car will weigh 1,700 pounds. Mr. Hayden is a member of the Automobile Club of America and will use his new machine in New York until May 16, when it will be crated and shipped to Europe. The machine will be visited and early in June Mr. Hayden will go to Germany to witness the cup race.

## MOTOR

#### MOTOR BOATS THE ATTRACTION

New York, Feb. 20.—The sportsman's show, which opened last evening, has taken on an entirely new phase and gives convincing testimony of the overwhelming popularity of the automobile boat. Heretofore while launches have been exhibited as a part of the sportsman's outfit little attention has been paid to them, and the great features of the show have been the game and woodland exhibits, the guides and the Indians.

This year there are no Indians and the camps and woodland exhibits are cut down to a minimum, while all available space is given to motor boats. The "lake," always a prominent feature, has been reserved for launches, and nearly all the main floor space around it is devoted to exhibits of motor boats and marine motors. The lake is covered with an entirely new type of boat, the high-speed model, of extremely light construction, fitted with the latest type of automobile motor. Not only the recognized launch builders, such as the Gas Engine & Power Co. and the Standard Construction Co. are represented, but the automobile makers are equally in the competition.

Smith & Mabley, Hollander & Tangeman and A. Massenet & Co., the representatives of Panhard and Levasor, are all present with new boats of the latest design and construction.

The regular type of American launch and launch motor is well represented by the Trustcott Boat Mfg. Co., Lozier Motor Co., Western Launch & Engine Co., Eagle, and other prominent concerns, these showing launches and motors which attract general attention as appealing to the wants of the average launch user. As a matter of course, however, the rac-



ing boats are the sensation of the show, and the edges of the lake are thickly crowded at all hours.

The exhibit of racing craft is too new to be described offhand. Each boat presents peculiarities of model, construction and powering which demand a careful study. Interesting as this part of the show is to Americans, it is still more important to the foreign builders, as it proves that their temporary superiority is already threatened. To the motorist the whole exhibit is interesting in the extreme as showing the astounding influence of the automobile industry on a far older and more firmly established business, that of marine motor building. As yet many spaces show only the sign "snow bound," and it will be several days before the show assumes final shape.

#### CROKER'S NEW BOAT

New York, Feb. 22.—Frank Croker's motor boat hull, designed and built by Charles Herrshoff, was placed on exhibition last week. It is to be fitted by Alexander Fischer with two 24-horsepower Robert-Schneider motors. The hull is 43 feet over all and in

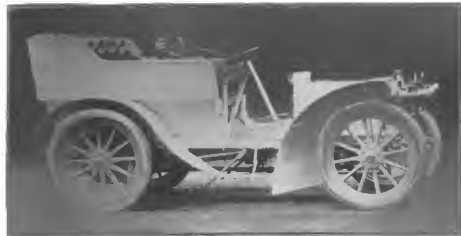
made of Honduras mahogany in two layers, the inside planks being laid on the bias and cemented to the outer layer. There is also an outside coating of the cement, whose composition is secret. The boat is almost entirely decked over. It has a cockpit forward for the steersman, who also operates the engines; a cockpit amidships, for the engines, which are placed side by side, instead of tandem, and a cockpit aft for four passengers. The hull weighs 540 pounds and the engines about 500 pounds. The boat draws 6 inches of water. Mr. Croker will take his boat abroad as soon as the engines, which are now ready, are put in and will race it in match and open contents. A speed of 27 miles an hour is expected.

#### CUP ENTRIES EXTENDED

New York, Feb. 24.—Announcement is made that the time for closing the entry list for the Harmsworth cup international motor boat race has been extended to June 20. On the strength of the Automobile Club of America has opened the American list and will receive entries until June 1. Smith & Mabley have already entered Vingt-et-Un. If only two more entries are received, the American team will be complete; if more than two are received, trial heats will be run to eliminate all but three. With all the speed propositions being constructed the American team of three should be complete.

Motor boat, power boat, speed boat, launch, automobile boat, auto boat, watercraft are a few of the names given the craft propelled by gasoline engines.

# THE BENZ-PARSIFAL CAR



THE 22-HORSEPOWER BENZ-PARSIFAL CAR

THE name Benz has been linked with the automobile since its beginning and a few of the earlier cars produced by Carl Benz at Mannheim, Germany, were brought to this country, but the modern representatives of this honorable line of German-made motor cars have never been extensively imported. Last season the Mead Cycle Co., of Chicago, took hold of the machine and was so successful in handling it that arrangements were made to import it on a much greater scale this season. Consequently a general introduction of the Benz-Parsifal, as the car is now called, is anticipated.

Like most European automobiles the Benz is made in a multitude of patterns, all based on two and four-cylinder chassis. The latter are of two kinds, those with propeller shaft and those with double side chain final drive. The 1904 four-cylinder car, with double chain drive, which the Mead company exhibited at the Chicago show, is a good example of Benz construction.

It is a 2200-pound, 18 to 22-horsepower, four or six-passenger car, with a wheel base of 91 inches and standard tread. The wheels are 36 inches in diameter and are fitted with  $4\frac{1}{2}$ -inch clincher tires of the continental style, the imported cars being fitted here with continental pattern Diamond tires. Both axles are approximately 2 inches in diameter and of solid steel, with the spring seats forged integrally with them. The front axle has the downward curve characteristic of European machines, but the clearance here, as throughout the machine, is greater than it is in the average French car. The rear axle is slightly arched and the ends of both axles are pitched sufficiently downward to give the wheels a slight inward pitch or dish. The front axle has the jaw style of steering knuckle, but this is of unusually heavy construction, and is of the length of the steering head is entirely above the axle itself. The steering knuckle pin is phosphor bronze bushed and is adjusted and locked from the bottom of the head. The connection between the two knuckle lever arms is in front of the axle.

The wheels are, of course, of wood. They run on ball bearings front and rear. These bearings are peculiar, for instead of having the ordinary adjustable two or three contact point set of cones and cups, the balls run in outer and inner races, each formed of an annular ring with a curved recess or raceway,

The line of thrust is like that of a four-point bearing, but there are, of course, only two contact lines in each bearing. The inner ring is solid and slips over the axle with a key and keyway engagement to prevent turning. The assembling of the bearing is done in a peculiar way. In the inner or axle ring there is a slight depression across the face of the race-



THE BENZ HEAD-ON

way. This allows the balls to be slipped in between the two rings, although at other points the distance between the edges of the rings is less than the diameter of the balls, making the bearing, when assembled, self retaining. The depression through which the balls are inserted is filled with a hardened and ground piece which just completes the ring, making its entire periphery without a break. This piece is

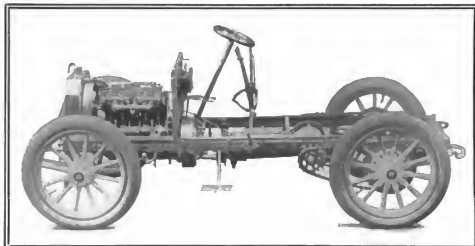
held in place by the removable key, which extends upward on each side of the ring to prevent the inserted piece from turning, and whose holding screw, inserted through both key and ring, extends also through the loose piece to secure it rigidly in position. When assembled the break in the continuity of the ring is barely noticeable, it being probable that the raceway is ground after the loose piece has been fitted to it, the piece then being removed for the assembling of the bearing and finally reinserted. The axle ends are 1 1/2 inches in diameter at the inner end of the wheel hub and 1 3/4 inches at the outer end.

The sprockets on the rear wheels, instead of being attached through arms or rods extending inwardly from the spokes, are integrally formed on stout rings or cups, each of which is attached by bolts, one through each of the twelve spokes, close down onto the hub of the wheel. The drum for the lateral expanding brake on each wheel is attached directly to the inner face of the sprocket by bolts. These brakes are of the metal-to-metal pattern and are strongly secured, the expanding shoes being pivoted directly on a short ear on the rear axle.

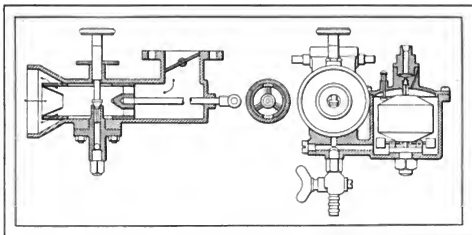
The springs, front and rear, are semi-elliptical, and all are of five leaf and 1 3/4 inches wide. The front springs are 34 inches long and the rear ones 40 inches long. They are hung by the usual "pump handle" frame extensions at the outer ends and by curved hangers at the inner ends. Each spring has a rubber buffer.

The running gear frame is of wood, the side bars being 3 inches high by 2 inches wide. They are armored with steel flitch plates whose widths taper down toward each end, and which are bent over inwardly at the top to form flanges to increase lateral rigidity. There is no sub-frame. The ends of the frame are closed by cross bars, but the motor is mounted directly upon the main side bars by arms cast upon the crank case. The crank case is held by what might be termed a sub-frame, but which is in reality a pair of main frame cross bars of channel steel, sufficiently dropped in their middle portion to receive the gear case at its correct vertical position. Otherwise the running gear is clear of framing.

The steering gear comprises the accepted form of worm and segment gearing. The wheel shaft extends upward through a hollow rigid post, and carries the throttle governor and spark lead controlling mediums. So far as the steering post parts are concerned, these comprise levers on top the wheel with worm



CHASSIS OF THE FOUR-CYLINDER BENZ



MOTOR AGE

THE BENZ CARBURETOR

and gear connections whereby they act to raise and lower ring collars on the extreme lower end of the steering post. This upward and downward movement of the collars is independent of the rotation of the steering post and is utilized to actuate the throttle governor and the ignition elements, which the levers on the wheel are intended to control. Two ordinary distance rods with turn buckles for adjustment, and two double-legged springs, complete the running gear proper.

The motor consists of two of the regular Benz two-cylinder vertical motors, with the cylinders of each pair in a single casting comprising cylinders, heads and valve chambers, and with a continuous water jacket over each pair. The aluminum crank chambers for the two pairs of cylinders are separate, but are set closely together and there is but one crank shaft for all four pistons. The crank shaft bearings have bronze bushings with babbitt centers. These are set in journal boxes which extend past their ends somewhat to form oil retaining pockets. The bore of each cylinder is 3 1/4 inches, the stroke 4 5/16 inches, and the normal speed of the motor 900 revolutions. It is said that the speed of the engine may be varied from 250 to 1,200 revolutions.

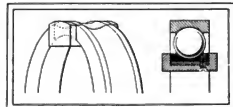
All the valves are mechanically operated, the inlet valves being on the left side of the motor and the exhaust valves on the right. The valves themselves are easily removable, each pair of exhaust or inlet valves being held down by double arm cross-bars which are themselves secured to the cylinder head, each by a central bolt and nut. Removing this nut and taking off the cross bar allows the valve to be lifted out. The valve springs are retained by being turned crosswise at the end and inserted through a cross hole in the valve stem.

The valve cam shafts are enclosed in the crank cases and thus run in oil, but the gears are outside, at the rear end of the case. The gear on the inlet valve cam shaft drives the magneto shaft, while a pinion on the latter shaft drives the pump. The commutator is directly on the front end of the exhaust valve cam shaft, while the governor is on the gear on the same shaft.

The motor has both jump spark and make-and-break ignition. The former is supplied with current from a two-cell storage battery, through four small induction coils and a commutator of usual form, and is used chiefly for starting, for testing to see whether the make-and-break ignition is at fault, and in cases of emergency. The make-and-break ignitions is used for the regular driving and its current is furnished by a low tension magneto placed upon the side of the engine crank case. The

make-and-break device is in each instance on the end face of the valve chamber with the electrodes extending into the chamber, directly below the inlet valve. It is actuated by a push rod given its motion by the inlet valve cam shaft. There is a knife switch in each ground circuit of the make-and-break system. All of the wires leading to the cylinders are rubber covered and contained for the length of the meter in a longitudinal brass tube.

The water circulation system includes a typical cellular radiator with a fan that is belt driven from the motor, and a gear pump. A feature of the pump is a reservoir, or stand



MOTOR AGE

THE BENZ WHEEL BEARING

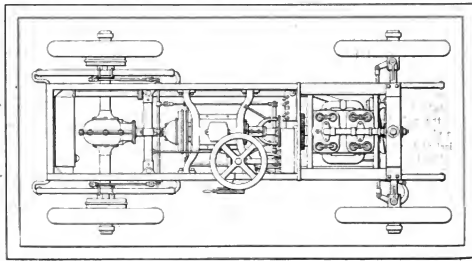
pipe, directly above it to render the action constant and to prevent the pumping of air. The water in circulation goes from the pump to the base of the cylinder water jacket; from the top of the jacket to the top of the radiator; from the bottom of the radiator to the pump. The whole system contains 3 gallons of water.

The carburetor is peculiar to the machine. It has the regular float feed chamber with hollow metal float and with an ordinary flusher. The supply of fuel to the mixing chamber is through a vertical passage regulated by a needle valve. The mixing chamber is in the form a horizontal cylinder, with the needle

valve approximately in its center. At one end the chamber enlarges into an open funnel, through which the air is drawn. Within the chamber is a closely fitting cylinder adapted to slide backward and forward, and this movement is controlled by a rod which extends out of the mixing chamber at the end opposite the funnel. At the funnel end of the chamber the sliding tube has a series of peripheral holes and also an inwardly extending conical nozzle. At its other end this tube is provided with a stepped cone, intended to break up the gasoline drawn against it by the rush of air from the open end of the chamber. Past this cone the mixture passes upward by a simple rocking valve, which, by exteriorly applied control, regulates the amount of fuel passing to the motor and thus becomes a throttle. The action of the carburetor to allow the quantity of mixture taken to the engine to vary without varying its quality or richness, is as simple as its construction. When the sliding tube is extended outward into the large funnel on the mixing chamber, the incoming air current passes into it through the peripheral holes as well as through the small inner funnel. The current is thus somewhat dissipated, and does not draw as heavy a charge of gasoline through the needle valve and against the spraying cone as though it were a stronger current. As the sliding tube is moved inward the tendency is to cut off the entrance of air through the peripheral holes and to centralize it into a stronger current through the inner nozzle, which also, by virtue of its nearer position to the needle valve, causes a more forcible rush of air into the chamber and the consequent picking up of a heavier charge of gasoline. This regulation of the air current is gradual between its limits.

The inlet of the fuel to the cylinders is through a T pipe which terminates at each extremity in a chamber between the inlet valve chambers of each pair of cylinders. Each cylinder thus draws its charge through the same length of pipe from the carburetor. The gasoline tank, which is under the driver's seat, holds 18 gallons. In the gasoline pipe between the tank and the carburetor there is a small chamber with a water filter. This section of the pipe is sunk 2 inches below the level to afford a natural drain for impurities in the fuel.

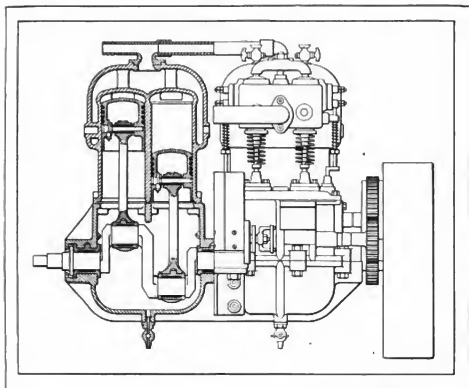
The lubrication of the motor is, of course, by the splash system, with oil supplied from a sight feed lubricator on the dash board of the car. This lubricator is of the pressure feed variety, the pressure being taken from



MOTOR AGE

CHASSIS OF PROPELLER SHAFT DRIVEN BENZ





THE BENZ FOUR-CYLINDER MOTOR

the muffler. It includes a supplementary tank with hand pump to use in emergencies and to clean out the feed tubes should they become clogged. Each cylinder has an independent relief cock on its head and each cock is provided with a small end funnel to be used as a convenience in pouring kerosene into the cylinders to clean them or when priming the cylinders. On each crank case is a pressure vent in the form of a small brass stand pipe with perforated cover to prevent the splashing of oil. There is an open oil relief cock to maintain the correct maximum oil level in the case, and there is also the usual drain pet cock on the bottom of each case.

While the motor is started on the jump spark ignition system, it is intended to be run mainly on the make-and-bend system, and hence the commutator of the jump spark system does not provide for any great speed. It does, however, provide long contacts, so that the motor may be started readily from almost all points. The limited spark lead of this system is controlled by the upper lever on the timing wheel. The lower lever controls the governor, which acts directly upon the throttle and is hence the principal speed controlling element. The action of the manually controlled governor, which, as previously mentioned, is on the exhaust valve cam shaft gear, and which is of the ball type, is two-fold. In the first place it regulates the throttle opening on the carburetor. Inasmuch as the action of the sliding tube is the mixing chamber of the carburetor where by the mixture of air and gasoline is regulated according to the speed of the motor and the quantity of the final charge of fuel taken to the motor is mechanical, it becomes a necessary part of the action of the governor to operate this sliding piece simultaneously with the action of the throttle. The manual control of the steering wheel simply limits or releases the action of the engine governor. A pedal furnishes an instant and complete cut-out of the fuel supply.

The needle valve which regulates the initial flow of gasoline into the mixing chamber of the

carburetor need only be changed to provide for changes in atmosphere, or, more broadly, weather changes. To render its adjustment convenient, however, the needle valve regulating means are carried upward to the top of the dashboard, within easy reach of the driver from his seat.

The transmission is through the usual fly wheel cone clutch to a four-speed and reverse sliding gear set. A feature of the clutch, which is of large diameter, is that the leather faced male member, when drawn out of engagement, is brought into contact with a fiber lined brake shoe, which, by bearing against the edge of the clutch member, tends to stop its rotation.

The transmission gear is held in an aluminum case and its main shaft is connected to the clutch shaft through a two-part coupling, the separation of which permits the instant removal of the clutch. The shafts of the transmission gear run on ball bearings. The set is simple with a direct drive on the high speed, the secondary shaft then running idle. In the gear for the car with the double slide chain drive, the differential gear is in an extension

of the case, on a cross counter shaft running on ball bearings and fitted with a pedal operated band brake. This shaft is, of course, driven by a bevel pinion and gear. It is held in long bearings on the side frame members, with universal joints at each end, just inside the bearings. In the propeller shaft model the differential gear is, of course, on the rear axle. In this model, also, the transmission gear case, instead of being supported on two cross channel bars, is hung directly upon the side members of the main frame by means of long arms cast integrally with the under half of the case. The frame of the propeller shaft model is, incidentally, of the pressed steel variety instead of armored wood construction as in the other models.

All of the speed changes are obtained by one side lever. Another side lever operates the rear wheel brakes. The clutch is operated by a pedal. Another pedal throws out the clutch and applies the counter shaft band brake.

The final drive of the chain model is by two roller chains,  $\frac{3}{8}$ -inch wide and of  $1\frac{1}{2}$ -inch pitch. A feature of the chain system is a supplementary link which allows the insertion of just half the length of a complete link, or of one pitch unit of chain instead of two. This is convenient in adjusting the length of the chain within limits greater than that of the distance rod adjustment and not so great as two full pitch units. Another small feature, and one which appears throughout the machine, is the fastening of each nut by a cross cotter pin, there being six slots across the face of the nut to engage this pin, no matter at what point it becomes tightened.

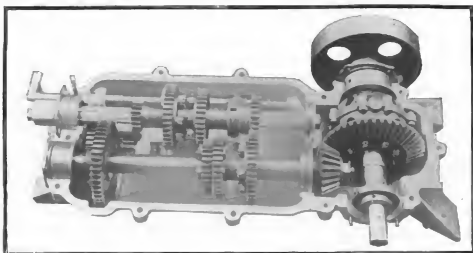
The body on the Benz, like that of most European cars, is much at the option of the purchaser, any style of body being adaptable to the chassis, which is complete in itself. The general body construction is such that the whole body may be removed by taking out eight bolts. The rear fenders extend to the step; the front are pionshare and all are independent of the body, and are not affected by its removal.

#### RECENT INCORPORATIONS

St. Louis, Mo.—American Automobile Transit Co., capital stock, \$12,500. Incorporators, G. P. Lanigan, A. G. Lewis, G. F. Eggert, L. B. Lanigan, A. D. Anderson and Myron Peers.

New York—New York Auto Transfer Co., capital stock, \$100,000. Directors, G. W. Left, S. M. Fischer, H. S. Hillferty.

Louisville, Ky.—The Kentucky Automobile Co., capital stock, \$24,000. Incorporators, Ira S. Barnett, A. Levy, Hubert Levy.



THE BENZ SLIDING GEAR TRANSMISSION



## THE READERS' CLEARING HOUSE

### POWER BY FLY WHEEL INCREASE

Stanwick, N. J.—Editor *MOTOR AGE*—What horsepower will a gasoline engine of 5½-inch bore and 6-inch stroke, and with a fly wheel 22 inches in diameter, of 5-inch face and weighing 150 pounds, develop at 700 and at 750 revolutions? How much power would this motor develop with another fly wheel of the same weight and size? Would the additional fly wheel be safe at the speed given?—N. O. W.

The motor would develop about 8½-horsepower at 700 revolutions and about 9-horsepower at 750 revolutions. The fly wheel is heavy enough. The addition of another of the same weight would serve no purpose.

### USE OF PICRIC ACID

Rochester, Ind.—Editor *MOTOR AGE*—What is the kind and amount of acid used per gallon of gasoline to increase the speed and efficiency of the motor?—J. P. STINSON.

Picric acid is used to increase the efficiency of gasoline motors. The advisability of its use is doubtful, however. It has been tried with varying results. The following treatise on picric acid and its use, by H. A. Thiersch in an English paper, is fairly comprehensive of the question.

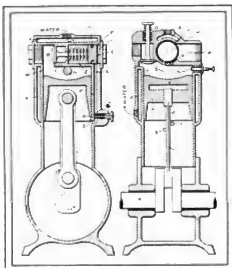
"Picric acid is prepared from carbolic acid—phenol—by treating it with nitric acid, a process known as nitration. It forms small yellow crystals with an intensely bitter taste, but is not, unless in very large quantities, actually poisonous. Though it can be handled with practically absolute safety, it can also be made to behave as a very powerful explosive. It is slightly soluble in gasoline. These last two facts show at once that it might conceivably be used to 'enrich' gasoline.

"Now, supposing there are two explosives, both normally generating the same volume of gases, the one which produces the greater heat will be the more powerful. As both the volume of gases and their temperature can be calculated from the known composition of any explosive, it is easy to see how they compare as to energy. Examined in this way, picric acid is, weight for weight, more powerful than a gasoline-air mixture, and should apparently have advantages over this. But as picric acid is a solid and cannot be vaporized under the conditions obtaining in an explosion motor, it must plainly be mixed or dissolved in a medium, such as gasoline or alcohol, which will carry it into the cylinder.

"Further, as picric acid cannot be readily exploded either by a flame or by any electrical firing system, it is necessary that the carrying medium should itself be of an explosive nature. For it has been proved, that picric acid can usually only be fired by an initial detonation; that is, by the explosion of some substance either in contact with it or in close proximity. This result is obtained by dissolving the picric acid in a solvent such as gasoline, and carrying this, vaporized and mixed with air, into the combustion chamber. The gasoline-air mixture is fired by the spark in the usual way, in turn exploding the picric acid; and, as the two explosions take place with almost instantaneous rapidity, they may be considered as simultaneous. The practical result is therefore that the spark fires the picric-gasoline-air mixture, giving greater power than with one consisting of gasoline and air only.

"The quantity of picric acid used should not be large, as experiments have shown that, if it materially exceeds 5 per cent of the gasoline, firing is not certain. That is, the initial explosion is insufficiently strong to explode a greater proportion of picric acid. Even this very dilute mixture seems to materially increase the power—exactly by how much has not yet been determined but it probably varies from 5 to 15 per cent.

"But picric acid has two very great disadvantages. It acts very strongly on metals, corroding them, and the products of explosion



THE GOODRICH MOTOR

invariably contain corrosive gases. Not only the gasoline tank, but every part of the motor which could come in contact with the acid would very speedily become corroded, and accurate working of the parts would soon become impossible. Further, as picric acid is not volatile, while gasoline is, as soon as this is vaporized the picric acid must separate, the result being that it is present in the 'mixture' as a very fine powder or dust. It is therefore reasonable to expect that much of the acid will be deposited on every part of the motor between the carburetor and the combustion chamber. This is actually the case, and a small portion of the picric acid never gets so far as to assist in the explosion. The inlet valve gradually becomes choked, and ceases to work satisfactorily, and after some time would become seriously pitted and corroded. As the carburetor is constantly in contact with the acid, it would be acted on in a similar way.

"The other point, that of the corrosive products of combustion, is not so serious. With efficient lubrication of the cylinder, which is, of course, in any case essential, corrosion need not be feared, as metal which is thoroughly oily or greasy is not attacked by such gases.

### CEARLESS FOUR-CYCLE MOTOR

Chicago—Editor *MOTOR AGE*—The accompanying drawings show a four-cycle gasoline motor which, by the construction of its valves, has several advantages over the ordinary four-cycle motor. In the first place, the motor may be built much more cheaply than the ordinary engine because it has no valve operating cam shafts and gearing; then, the exhaust valve being actuated by the impulse it-

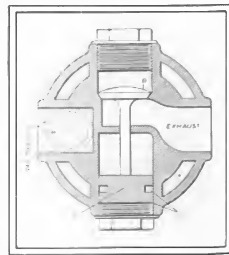
self there can be no exhaust of unburned gases, and hence the fuel consumption will be economical; finally, the motor should be extremely flexible in speed control.

The motor consists of a cylinder M, surrounding the piston P, which is connected by the rod L to the crank shaft K. The port or cavity X, surrounding the cylinder wall is the water jacket, and is connected by suitable pipes to a source of circulating water. The auxiliary cylinder F, attached to the cylinder, contains the auxiliary piston E. R and S are ports or passages connecting the main cylinder cavity T with the cavity U in the auxiliary cylinder.

The operation of the valves is as follows: The gas mixture enters from the carburetor, or mixing valve, through the valve A, which is an atmospherically operated valve, and opens when the piston P starts on the downward stroke, remaining open as long as a partial vacuum exists in the cylinder T, and closing at the beginning of the return stroke of the piston, thus causing compression of the gas in the cylinder. When the piston is in a position to start on the next downward stroke, the gas mixture in the cylinder is ignited by the electric spark at N, causing the impulse which forces the piston downward.

When the piston reaches the lower end of the stroke it causes the port R to be opened, and a portion of the initial pressure passes through the port into the cavity U. This forces the auxiliary piston E away from its seat, opening the exhaust valve B and holding it open until the piston P completes the upward stroke, which allows the burned charge to pass out into the atmosphere; while the lower edge of the piston P, by opening the port S, allows the pressure to fall to zero behind the auxiliary piston E. The spring Z then forces the auxiliary piston E to its seat, thus opening the port R and closing port S and the valve B. When the piston P starts downward, the gas valve A is opened, thus admitting another charge of gas mixture, and a succession of the events described occur.

The valve Y serves as a check valve to retain the pressure in the cavity U until released by the opening of the port S, which is effected by the piston P. The spring G is so placed as to cause a slight tension on the valve A to keep it normally closed. The auxiliary cylinder F may be placed on any part of the cylinder, with suitable port connection to the cavity U, directly operating the valve R without departing from the nature of the motor.—L. J. GOODRICH.



VALVE CHAMBER OF GOODRICH MOTOR



The Jefferson Automobile Livery Co., of Detroit, Mich., has decreased its capital stock from \$29,000 to \$2,000.

A new caravansary in Paris is called the Mercedes hotel, and it is presumably to be run primarily in the interests of motorists of 60-horsepower or more.

The children of the members of the Automobile Club of France were entertained with a ball on Valentine's day. This event occurred on Sunday, but that did not disturb the serenity of the occasion.

The landlord of the Black Swan Inn at Crawley, England, had his license suspended for a month because he refused to serve tea to a chauffeur. The landlord told the minister that a "gentleman ought to know better than to order tea at an inn."

At the recent motor cycle and bicycle show, held in Manchester, England, 107 motor bicycles were exhibited. At the show held in 1903 only seventy-eight were exhibited, while in 1902 the number was eleven. The first and only motor cycle seen at a Manchester show was in 1900 and at the exposition held in the following year two were shown.

At one of its recent meetings the Autocycle Club of France decided to arrange a motor bicycle endurance run to take place the latter part of April. The course chosen is from Paris to Bordeaux and back, in four stages: Paris-Tours, Tours-Bordeaux, Bordeaux-Tours, and Tours-Paris. The approximate distance of the run is 725 miles.

At recent meetings of the different French automobile boards of trade it was practically decided that none of the manufacturers would exhibit at the international sport and hygiene exposition, which will be held in the Grand Palais during the summer. The general opinion is that the show will not be of sufficient importance to warrant outlay in connection with it. It is possible, however, that those who manufacture automobile ambulances will show such vehicles only at this exhibition.

The Hungarian post and telegraph administration has decided to purchase eight motor cars, which will be used for collecting mail and parcels in large towns. Some of the conditions which bidders for the order must observe are: The cars must be equipped with a two-cylinder gasoline motor developing 10 horsepower; each car must be able to carry a maximum of 1,000 pounds, not including the persons; the maximum speed is to be 18½ miles per hour, and it is suggested that the cars shall be able to maintain an average speed of

3 miles per hour in climbing hills having 7 per cent grade.

A private telephone line has been built between the Lansing and Detroit plants of the Olds Motor Works. The line is over 100 miles long.

The E. W. Bliss Co., of Brooklyn, N. Y., has taken up the manufacture of automobiles, and experiments which have been made have been so satisfactory that plans are being made for the installation of a plant which will permit extensive operations along this line.

The automobile is beginning to fill a prey to poets, and may soon rank with soap and patent medicine as an inspiration producer for the long-haired gentry. Rudyard Kipling is the latest addition to the automobile poem singers. He is contributing a series of poems having motoring for their theme to the London Daily Times.

There were 1,332 automobiles and 714 motor bicycles in Belgium on December 6, 1901. One year later there were 1,091 cars and 1,427 motor bicycles. On the corresponding day of December, 1903, official reports show that there were 2,628 motor cars and 2,671 motor bicycles in actual use in Belgium. Thus the use of automobiles has almost doubled within 3 years and the use of motor bicycles is nearly four times as great.

The Automobile Club of Milwaukee, Wis., is agitating the question of a club house, but so far no definite action has been taken. Owing to the increasing interest in automobilism in Milwaukee there has been a considerable increase in the membership of the club, and as an active season has been planned, which will include a number of interesting club runs, it is thought there will be a further increase of membership this year. The club has never had quarters of its own, and the more progressive members are understood to heartily favor the clubroom plan.

A three-story automobile house is to be built for Andrew Carnegie at 55 East Ninetieth street, New York. The building will cost about \$20,000. It will be of fireproof construction with a front of white marble and Harvard pressed brick, of colonial style. On the lower floor will be the large storage room, lined entirely with white enameled brick and paved with red acid proof brick. In the rear will be the charging room. The two stories over the storage room in the front are to be equipped as living rooms for the men who will operate and care for the vehicles. Four electric automobiles will be stored in the house.

The Gardner-Serpollet concern, of Paris, has received an order for a number of 20-horsepower omnibuses for Martinique. Each omnibus must seat eighteen passengers and must have a part of the car built for carrying mail, parcels and dispatches.

The eighth annual cycle and motor show was opened at St. James's hall, Manchester, England, January 28, and continued until February 6. No motor cars were exhibited, but practically all the leading manufacturers of motors and cycles were represented, together with several tire firms.

The months of January and February have been strenuous ones among the makers of automobiles. There have been seven large shows in various parts of the world, besides several of lesser importance. New York, Brussels, Turin, Chicago, Amsterdam, Rome and London have each had successful shows, and the industry has profited exceedingly thereby.

The Continental Rubber Works, of Erie, Pa., has purchased the business and patents of the Milwaukee patent puncture-proof tire and will have the exclusive right to manufacture and sell this tire during the life of the patent. The tire will be manufactured and marketed direct from Erie, and will be marketed under the name of the Milwaukee patent puncture-proof tire.

M. C. Henley & Son, of Richmond, Ind., who have district agencies for a number of automobiles, are erecting a garage on Main street near Twelfth, in that city. The front of the building is two stories, and will be occupied as office, reception room and salesroom. A concrete driveway will lead through the entire building from Main street to the street at the rear. The one-story truss roof of the building will have a concrete floor and the entire building will be of fireproof material. It will be ready for occupancy about April 1.

The E. J. Willis Co., of New York, has made arrangements with the Quaker City Automobile Co. to represent it in Philadelphia, Pa., where a full line of all the automobile supplies manufactured and carried in stock by the Willis company will be carried. The Willis company is desirous of hearing from houses in other large cities who would care to represent it. The company has also added marine engines to its stock and will handle the Baldwin marine motors, and has taken the agency in New York for the Prescott steam automobile.

American automobilists who desire to tour England can save trouble and annoyance by communicating with S. M. Butler, secretary of the Automobile Club of America, and arranging through him with the secretary of the Automobile Club of Great Britain and Ireland for complying with the necessary requirements of the law. The secretary of the British club has written the secretary of the A. C. A. saying: "If you will give me 2 or 3 days' notice of the intention of any of your members coming here to tour, and will provide me at the same time with a description of their cars—the make, horsepower, color, etc.—the probable date of arrival and port of arrival, also the full name and address of the owner, I will have the necessary plates, together with license, ready for them at such landing point, by which means I think the least amount of delay and annoyance will be caused."

# AMERICAN MOTOR LEAGUE

## OFFICERS:

ISAAC B. POTTER, President,  
Potter Building, New York  
CHARLES E. DURYEA, First Vice-Pres.,  
Reading, Pa.  
W. GRANT MURRAY, Second Vice-Pres.,  
Adrian, Mich.  
S. W. MERRIHEW, Third Vice-Pres.,  
324 Nassau St., New York  
ROBERT L. STILLSON, Secretary,  
150 Nassau St., New York  
FREDERICK R. HILL, Treasurer,  
32 Hinford St., Boston.

National Headquarters:  
150 Nassau Street, New York



## CHAIRMEN OF NATIONAL COMMITTEES:

LEGISLATION—  
George H. Bidwell, New York, N. Y.  
ROAD IMPROVEMENT—  
H. E. Hida, Lansing, Mich.  
LOCAL ORGANIZATION—  
Charles F. Potter, Denver, Colo.  
TOURING—  
W. H. Baker, Buffalo, N. Y.  
TECHNICAL—  
Charles E. Duryea, Reading, Pa.  
MEMBERSHIP—  
Frank A. Egan, New York, N. Y.  
SIGN BOARDS—  
John B. Price, Haddonfield, N. J.  
RACING—  
A. G. Barchelder, New York, N. Y.  
PRESS—  
Joseph Esterlet, Philadelphia, Pa.  
HOTELS—  
Francis N. Bain, Newburg, N. Y.

## OFFICIAL BULLETIN

### GOOD ROADS IN SIGHT

The United States government is thinking it over. There is a proposition in congress to depart from the parsimonious and pickaninny policy by which the "roads inquiry bureau" has been barely kept alive and to spend a few millions, or more exactly \$24,000,000, in the building of better roads. A bill known as the Brownlow-Latimer bill embodying the best features of the two bills recently introduced by Senator Latimer and Representative Brownlow, has been put under way in both houses and is gathering strength so rapidly that its prospect of success is fairly good.

### THE BILL IS REASONABLE

The bill is more than reasonable; it is necessary. The sum proposed is neither large nor extravagant. Within the last 5 years we have spent about \$700,000,000 in the Philippine islands, and within the last 10 years the government has appropriated nearly \$180,000,000 for the improvement of rivers and harbors. Notwithstanding these and other large items of expense, the last treasury balance shows a surplus of nearly \$270,000,000.

Answering the charge, or rather the suggestion, that the proposed expenditure of money by the general government for road improvement in the several states savors of paternalism, Senator Latimer, of South Carolina, in a recent speech before the senate said:

"It has been said that the proposition of federal aid to improve the roads is paternalistic; that its tendency will be to cause the people to rely on the general government too largely, and not exercise their own resources and energies. But this argument has no basis in fact. Why is this plan paternalistic? Does it give to the people a sum of money out of the treasury of the general government to aid them in their private business? If it does, it is paternalistic; if it does not, it is not paternalistic. Are we to give a new meaning to the term 'paternalism'? Is it to mean from this time forth that any appropriation for a strictly public purpose, in line with the duty of the government and for the incidental benefit of the whole people as well as the state and general government, is paternalism? Does this bill do more than that? If it is paternalistic, then upon what reasoning do you defend appropriations for rivers and harbors, for removing obstructions in rivers within states, for destroying pests and diseases, and irrigating land, against the same objection? Are they not all more susceptible of being called paternalistic than this bill?"

"Can any democrat who voted for a bounty on sugar, or believed in the principle, or who believes in the protection of the raw material of his state, consistently call this measure paternalistic? Can any republican who believes in the doctrine of protection oppose it on that ground? Let us be frank. Upon many other questions paternalistic tendencies may have appeared; and no one will deny that the people ought to rely in the first instance upon themselves in their private affairs, otherwise their independence, manhood and ability for self-government would inevitably be sapped and finally destroyed; but this is the first time that the evils of paternalism have been seriously invoked against a strictly public improvement, affecting the whole body of the people equally, distributing the burdens and benefits equally, and that is in line with the duty and within the means of the government. It must fall to the ground as being without the shadow of force or consistency."

### DUTY OF EVERY AUTOMOBILIST

It is the duty of every thoughtful and patriotic citizen of this country to support this bill, and there is only one kind of support that will weigh one ounce in aiding its passage. The bill will succeed if members of the congress understand that the people are awake to the need of good roads and that an active sentiment exists in favor of the Brownlow-Latimer bill. There is an old proverb which says that the bashful dog goes hungry. People get very little without asking for it. As a rule officeholders are no lenders; they do less to create public sentiment than to test its trend and to answer its call. To this rule there is now and then a splendid exception. Once in a while we find in public office a man who is broad and brave and brainy enough to sit down by himself and work out the problems of human happiness and prosperity. He is the man whose hands should be upheld by thoughtful and progressive people.

### HOW TO PASS THE BILL

Every friend of this measure should write to the member of congress who represents his



district and ask him to support the Brownlow-Latimer bill and to vote for its passage. If the name of a member of congress is forgotten it may be learned by inquiry of the local postmaster or the editor of the home paper. A similar letter should be sent to each of the two senators who represent your state at Washington. Every automobilist should bring the bill to the attention of his friends and neighbors and induce them to write to the national legislators at Washington. The importance of doing these things is beyond measure; the task is nothing.

### COPIES OF THE BILL

A copy of the Brownlow-Latimer bill will be sent from league headquarters to any person who will take the trouble to send a postal card request. The bill provides that the sum of \$24,000,000 may be divided among the states and territories during the next 3 years, the division being made on the basis of population. Any state accepting its share of government money must appropriate a like sum out of its own treasury, so that, for example, a state receiving one million from the general government will expend two millions for better roads. The bill also provides for a bureau of highways under the direction of three commissioners, one from each of the two dominant political parties and the third an army engineer, all to be appointed by the president. The work of the commission is to be carried on as a part of the department of agriculture and its proceedings will be subject to the control of the secretary of that department.

The American Motor League is pledged by its constitution to support and encourage the work for better roads. Its supreme opportunity is here. It is not for the officers of the league to alone take up this work for they alone can do nothing. It is the time and the occasion for the "rank and file" of the organization to assert itself, and for each individual member to prove his personal worth and the worth of the great body of automobilists of which he is a member. There is a moral force in numbers—a force that is incalculable. Let every member do something in behalf of this bill now, and thereby raise himself in his own esteem and aid in carrying out the dignified purposes of the organization. It is the one movement that will ask every farmer the friend of the automobilist and remove the only serious obstacle that retards the rapid and universal adoption of motor vehicles.

# MOTOR AGE

VOL. V. NO. 9

MARCH 3, 1904

\$2.00 Per Year

## CLEVELAND'S

CLEVELAND, O., March 1. The darkest day in the recollection of the oldest residents, accompanied by a drizzling rain that thoroughly soaked every car as it was brought to the armory, ushered in the second Cleveland automobile show, which was formally opened last evening at Gray's armory. But these conditions did not keep away the cream of Cleveland's society. President E. Shriver Rowe, of the Cleveland Automobile Club, did the unveiling not at 7:30 and within an hour the tentile had registered over 3,500 admissions.

The armory was simply jammed, the crowd easily exceeding that of any evening in the show last year. The club aimed to make the opening evening a society event and well it succeeded. Nearly every one was in evening dress and aside from the interesting features at the various exhibits, it was a show worth going to see, for the best orchestra in the city had been engaged for the week and the decorations exceed anything ever attempted for a similar event in Cleveland.

A huge hall of incandescents is suspended in the center and draped from this are numerous streamers of red, white and blue lamps. Nearly every stand has an electric sign, where there were only two or three last year, while the decorations of the various stands are more elaborate than before.

B. J. Post, the Veeder man, who claims to have attended every bicycle and automobile show held in this country, says it is the most enthusiastic and the most elaborate local show he has ever attended. It is certainly a much more representative show than that of last year. The White, Peerless, Baker and Knickerbocker companies, that declined to participate last year, are out in full force this time, displaying through their local franchise agents while the out-of-town makers are also more numerous. There are more smaller people and more trade papers. Only in the tire game has there been a falling off, due to the decision

## GOOD SHOW

of the tire makers' association not to exhibit at any local shows. The list of local dealers, and manufacturers as well, shows several changes indicating that the automobile business is not in all cases a gold mine; two dealers and three manufacturers having withdrawn from the local field.

But, of course, while the show is of tremendous interest to local people who did not attend the big national shows, it is not really in the same class with those shows nor should it be expected to be. Only three cars that were not shown at the big exhibit are shown here. They are the products of makers in this territory. In the material line there are more novelties. One of these is a model of a rotary gas engine; another is a burner for steam machines, which it is claimed will utilize the cheapest grade of kerosene without odor, smoke or carbon deposit and with greater efficiency than gasoline. Then there is a new electrically operated speed indicator, and a preparation for increasing the efficiency of gasoline; also a mechanical device for the same purpose. Of the novelties that have been shown elsewhere, one of the most interesting is the Edison storage battery, which has been so widely lauded as a revolutionizer. Walter Baker shows a car with a battery of this kind and he is kept busy detailing his experiences with the battery, which comes without compunction.

Francis racing cars are among the centers of attraction. At the Baker exhibit there is the Torpedo Kid, the fastest car of its kind in the world, while at the Winton stand is the eight-cylinder Bullet II, still the fastest car in competition, if not the world's mile straightaway record holder. The Packard people show the Gray Wolf, which holds the mile victory league record, and has probably passed through more wrecks than any other racer.

The automobile layout game has been limited here, and there is no doubt that it will take well. The little facts are not excessively ex-



pensive and as Cleveland has a good harbor and plenty of lake room, there is no reason why they should not sell well. The two lines work in well together and at least one prominent dealer intends to push both this season.

A summary of the various exhibits at the show follows:

**AUTOMOBILE GARAGE & REPAIR CO., Cleveland**—This company is agent for the Packard, Autocar and Waverley electric. The exhibit consists of a Packard four-cylinder chassis, Packard four-cylinder, 24-horsepower standard touring car, a two-cylinder 12-horsepower Autocar with tonneau, a 10-horsepower, two-cylinder Autocar runabout, two 12-horsepower chassis, a Waverley electric station wagon, and a Waverley physician's road wagon. The center of attention is the Packard Gray Wolf. The company is state agent for the Brown patent dust guard, the 8-ira tire spark plug, Mikolne metal polish and a non-fluid oil gun. These and other sundries are shown.

**AUTOMOBILE TOP & SUPPLY CO., Cleveland**—The company is agent for the Sandusky Automobile Co. and shows the Courier runabout, a 7-horsepower, single-cylinder car which sells for \$800. The company has recently been formed by W. G. Harding and G. A. Bottge, who expect to open a garage in the near future.

**ACME MOTOR CAR & REPAIR CO., Cleveland**—The company manufactures several lines of specialties. The Acme muffler is light, simple and inexpensive and is claimed to be practically without back pressure. The Acme tonneau dust shield is attached to the rear of the tonneau by a brass frame and rolls up when not in use. The Tell-tale cylinder detector is an electrical device used in detecting defects in a cylinder when two or more cylinders are operated in parallel. Dyno, a chemical, is used in gasoline and it is claimed will add to the efficiency of the fuel. Polar freezing compound is also shown. The last two articles are manufactured by the Auto-Accessories Co., of Cleveland, for which the Acme company is general sales agent.

**BADGER BRASS MFG. CO., Kenosha, Wis.**—The exhibit consists of an extensive line of Solar oil and gas lamps.

**BREW & HATCHER CO., Cleveland**—This company exhibited a simple car at Chicago, but a somewhat different model is now being manufactured. It has two cylinders, horizontally opposed and placed in front across the frame. The cylinders are 4½ by 5¼ inches and are suspended from an arched sub-frame. The transmission is of the sliding gear type, giving three speeds forward and a reverse. The power is transmitted through a shaft provided with universal joints and driving the rear axle through level gears. The carburetor is of the float feed type with automatic air valves. All valves are mechanically operated. There is a governor which controls both spark and mixture, giving all ranges of speed. The Mercedes type of bonnet is used and the water supply for the entire cooling system is contained in the radiators and cylinder jackets. The flow of water through the radiators is continuous through eight courses of tubing, four wide. Water is forced through the radiating system by a positively driven pump operated from the secondary shaft of the speed gears. The car has an 82-inch wheel base. It sells at \$1,750. The company is prepared to sell complete cars or motors and in addition has a single-cylinder motor. It also shows a large line of parts manufactured to the order of other manufacturers. A specialty is made of such work.

**CHISHOLM & PHILLIPS AUTOMOBILE CO., Cleveland**—This company has recently been organized and has the agency for the Peerless, Knox, Northern and National electric lines. It has started work on a fine garage in the east end. In the Peerless line it shows a 24-horsepower limousine model, a 24-horsepower four-cylinder touring car and a 24-horsepower chassis. In the Knox line is a two-cylinder, 18-horsepower chassis, a 24-horsepower chassis, an 8-horsepower runabout, and an 8-horsepower single-cylinder doctor's stanhope. In the Northern line are shown a 15-horsepower touring car and a runabout. In the National line is a National stanhope. For demonstrations the company has four Peerless touring cars, three Knox cars, including a delivery wagon, one National and one Northern.

**CONTINENTAL CAMBROTIC CO., New York**—Emil Grossman, manager, shows numerous samples of Continental tires, Continental lamps, horns, goggles, spark plugs, coils and other European goods which he is successfully introducing in this country. Several large drawings of prominent French cars decorate the stand.

**ELECTRIC SPEED INDICATOR CO., Cleveland**—An electrically operated speed indicator combined with a clock has just been brought out and a working model is shown.

**FREDONIA MFG. CO., Youngstown, O.**—This company's new cars were late in arriving and were not in place for the opening.

**GRAY & DAVIS, Amesbury, Mass.**—They show a complete line of gas and oil lamps.

**PAUL GAETH, Cleveland**—Mr. Gaeth is a local manufacturer who has built up a good trade in this section. His cars have never before been exhibited. He shows a single-cylinder car and a double-cylinder car, both fitted with tonneaus and tops. The cylinders in both machines are horizontal, with head and exhaust valve chambers cast in one piece and water jacketed. Circulation is obtained by the thermo-siphon system. The bonnet is practically square and the radiator is of the honeycomb style. Transmission is of the planetary type running in oil, giving two speeds forward and reverse. The forward speeds are obtained by the use of a single lever and the reverse by a pedal. The high speed clutch locks the complete transmission and applies power direct from engine shaft to rear axle through a heavy chain. The mixture from the carburetor is controlled through a foot button connected to the throttle. The spark accelerator is located at the side. Piston and connecting rod bearings are lubricated by a sight feed oiler. The steering mechanism is of the Brown Lipe pattern.

**GENEVA AUTOMOBILE MFG. CO., Geneva, O.**—This company displays through its Cleveland branch store, two models of the Geneva steam tonneau, with 10-horsepower, directly connected engine and flash boiler, listing at \$1,750; and a four-passenger, convertible 10-horsepower car with fire tube boiler, listing at \$1,250.

**WM. HLOUTH & CO., Jamestown, N. Y.**—A convenient combination wrench is shown. The tool is light and well made and combines a nut wrench, pipe wrench, wire cutter, tack puller and screw driver.

**HUSKEY DROP FORGE & MFG. CO., Cleveland**—An extensive line of forged and machined automobile parts is shown. It includes steering wheels, radiators, grease cups, funnels, circulating pumps, oil pumps, pipe strainers, lamp brackets, etc. One of the latest novelties is a weldless axle made from a single piece of steel with either drop or straight center, and made

from nickel steel if desired. In producing the nickel steel axle the company has designed a special furnace, fed by a specially designed stoker to procure the extreme temperature required to work this hard material. Another novelty is a simple lamp bracket designed for either side, dash or tail lamps. For use with electric lamps, it is made hollow, so that the wiring may be carried through it. Another new device is the Lehman universal joint of the ball type, claimed to be one of the lightest and strongest universal joints on the market.

**INTERSTATE FOUNDRY CO., Cleveland**—This company is producing special castings for a number of leading automobile makers and is equipped to take care of the most intricate work. It shows numerous parts, among them cylinders and pistons for the Winton company in rough and finished condition, also pieces for several other concerns. An automatic computing scale made by a Toledo concern is used to demonstrate the ability to do difficult casting.

**JOSEPH W. JONES, New York**—At a stand in front of the main entrance is shown the Jones speedometer, a mechanical device operating through a set of gears and a flexible shaft with a speed indicator on the dash.

**OTTO KONGSLOW, Cleveland**—A most interesting novelty is shown at this stand—a work-lab model of a rotary type of gas engine. Mr. Kongslow claims that the rotary gas engine is soon to become recognized as a practical motor. The cylinder casing is circular in form and at equidistant points on the casing are four valves, two inlet and two exhaust valves. Revolving upon a shaft are two blades which operate similarly to a ring pump. The motor operates at a high rate of speed, but it is claimed that it can be practically controlled and made adaptable for automobile work. Mr. Kongslow is experimenting in this direction. The Ottocar runabout exhibited by Mr. Kongslow has a single-cylinder, horizontal motor 4½ by 6 inches and planetary transmission with two speeds forward and reverse. It is fitted with tonneau and a square bonnet. An extensive line of stamped parts are also shown, including steering wheels, valve gaskets, spark and throttle controls, artillery hub parts, cups, cones, circulating pumps, bearings and other parts. The exhibit is in charge of L. J. Mueller, who is sales manager for the Kongslow line, and Mr. Mueller also displays a number of articles which he handles on his own account. Among these are the Indian motor cycle, Splitdorf coils, Herz ignitors and stationary and automobile motors built by the E. H. Clay Co., of Chagrin Falls, O.

**MATTHEWS BOAT CO., Boscom, O.**—Ralph R. Owen, of Cleveland, has the state agency for the motor launches manufactured by this company and is introducing them with decided success. Within the past few days he has sold no less than ten launches and the prospects are he will take many orders during the week. Runs are furnished either with or without motors. Two varieties are exhibited: A 16-foot fishing launch equipped with a 1-horsepower motor giving a speed of 6 miles an hour and having a seating capacity of seven passengers is offered complete for \$175. A 21-foot launch fitted with canopy top and holding from 18 to 20 people sells at \$330 without power and \$500 with a 5-horsepower motor giving a speed of 9 miles an hour. At the lake front Mr. Owen displays a handsome launch which was built for his own use. It is 32 feet over all and has a 15-horsepower engine and a cabin with



sleeping compartments, the cabin finished in solid mahogany. The boat cost \$2,600 and is one of the finest and fastest of its size on Lake Erie.

H. S. MOORE, Cleveland—Mr. Moore is manufacturing the Star automobile, having bought out the business and equipment of the defunct Star Automobile Co. The Star has a single-cylinder motor 5 by 6 inches, developing  $3\frac{1}{2}$ -horsepower at 1,000 revolutions. It is placed well in front with the head forward, so that the valves and parts are accessible by removing the floor in front of the seat. The motor is hung very low from a channel iron frame. The Champion planetary transmission is used and a single lever gives the high speed by a forward movement, and the low speed by a backward movement. The reverse is obtained through a pedal. Power is transmitted to the rear axle by a  $\frac{1}{2}$ -inch roller chain. The throttle and mixture are controlled by a swinging pedal which will remain in any position desired. The spark is advanced or retarded by a small lever at the side of the seat. The carburetor is of the float feed type. The car has an 80-inch wheel base, 30-inch wheels with 3-inch tires in front and  $3\frac{1}{2}$ -inch in rear, and weighs 1,250 pounds. The body is built practically to order. For two passengers it sells at \$850; with tonneau, \$950; delivery wagon top, \$950; canopy top, \$125 extra. Mr. Moore is agent in northern Ohio for the Orient hackboard and shows a sample of this little machine.

R. H. MAGOON, Cleveland—Mr. Magoon is agent for the Pope-Toledo and shows a single model of the handsome 14-horsepower, \$2,000 car. Sectional parts of the motor and transmission are shown.

NATIONAL CARBON CO., Cleveland—The exhibit consists of a line of Columbia dry cells and Auto cells for sparking purposes; also spark plugs.

OMMO MOTOR CAR CO., Cleveland—The stand is at the front of the hall and the line of cars on exhibition is the largest there. The company has just moved into a new garage which is undoubtedly one of the finest in the country and visitors who desire to do so are taken to it, open house being held this week. In large cars the company features the Stearns. Two samples of the two-cylinder, 24-horsepower car are shown, also a highly finished chassis. One of the cars is finished in white and fitted with canopy top and side baskets. In the Columbia line are the following: four-cylinder, gasoline touring car, two-cylinder runabout, electric victoria, electric brompham, electric landau and an electric runabout. These were shown at the big show and the larger electric in particular are attracting much favorable comment. In the Cadillac line there is a model B, a model B chassis, two cylinder machines of  $8\frac{1}{2}$ -horsepower, and a model A and surrey, both with  $6\frac{1}{2}$ -horsepower motors. Numerous parts of Stearns, Cadillacs and Columbia cars are shown. For demonstration purposes the company has two cars of each make in constant attendance. The company is general sales agent for Antocleaner, a new compound manufactured by the Specialty Chemical Co., of Cleveland. It is claimed the preparation will not injure brass, enamel or leather, and that it will instantly remove dirt, oil or grease. It is also claimed that a body treated with the preparation will not collect dust. Samples are distributed. The Ohio company is also sales agent for a new volt meter manufactured by the Page Volt-

meter Co., of Cleveland, a device the size of a watch, used in determining the voltage in a storage battery. It is made in two sizes.

OHIO OLDMOBILE CO., Cleveland—This company is state agent for the Olds line. The most interesting model is a new \$650 runabout which is shown for the first time at any exhibition. It has a longer and larger body and longer wheel base than the standard runabout and has a curved nose. The cylinder measures 5 by 6 inches, develops 7-horsepower and the use of packing is dispensed with. Another interesting feature is a standard runabout provided with glass sides, with the car in operation, enabling spectators to see the workings of all parts. A standard \$650 runabout, a touring runabout, a railway inspection car and a tonneau touring car complete the exhibit.

PRICE BROS. CARRIAGE CO., Cleveland—This is a strikingly effective stand in which are arranged all the models built by the Baker Motor Vehicle Co., for which it is local agent. In the center of the group of highly finished black cars is the little Torpedo Kid in pure white. The standard Baker models include the stanhope, imperial, Newport, runabout and the new four-passenger surrey. Also a special runabout fitted with the Edison storage battery which Mr. Baker has used widely in experimental work. This battery is attracting widespread attention and Mr. Baker's opinions on the much discussed subject are interesting. He claims that the ampere-hour capacity of this battery under favorable conditions is no greater than with the ordinary lead battery, but that under severe conditions such as fighting a head wind, or climbing a heavy grade the discharge is not nearly so rapid as in the case of the lead battery, hence for average work where all kinds of conditions are apt to be met with, the Edison battery gives a better mileage than other batteries. An imperial runabout is mounted on a roller stand to show the ease of control. Another Baker product is a motor generator or rotary converter set, for transforming alternating current to direct. The Baker company has sold a number of these outfits to users of electric vehicles. In addition to its advantages as a charging outfit, the outfit is valuable for exercising a battery in winter. This is accomplished by weakening the motor field through a rheostat and inverting the usual process, the current passing from the storage battery through the motor, generator and meter, onto the line again. The recording meter is of course inverted and the current used in the exercising process amounts to only what is consumed through friction losses in the machines.

SEYMOUR BROS., Cleveland—These gentlemen have just entered the retail field and will sell the Michigan runabout, the unique little machine which has the reputation of being the smallest automobile on the market.

TWENTIETH CENTURY MFG. CO., New York—This is a novel exhibit of the well known Twentieth Century lamps; a hundred or more of various types and sizes being mounted on a revolving Ferris wheel. At night all the lamps are lighted. The 20th Century mica spark plug, oilers and horns complete the exhibit.

VEEDER MFG. CO., Hartford, Conn.—The layout that has been duplicated at practically every automobile and bicycle show ever held; cyclometers, odometers and tachometers, in profusion, many of them in operation. In cases are shown samples demonstrating the various kinds of attachments required for the leading makes

of cars to avoid the necessity of special fittings.

E. R. THOMAS MOTOR CO., Buffalo, N. Y.—A three-cylinder Thomas touring car is shown. The Thomas people have no agent here but expect to secure one during the week for this car which proved greatly popular at the New York and Chicago shows.

WARNER AUTOMOBILE & MFG. CO., Cleveland—This company has just brought out a new burner using kerosene as fuel, which can be adapted to steam automobiles, brazing furnaces, plumbers' torches, and other devices. The generator for automobiles has not yet been completed for exhibition purposes, but the device is shown in operation on the other articles mentioned. The burner is simple, consisting of a coil of tubing passing around a hot tube. The kerosene enters one end of the brass tube under pressure and in passing around the hot tube it finally enters one end of the tube as a gas. It is claimed that the burner will use the cheapest grade of kerosene, that it is entirely odorless, will not smoke or accumulate carbon and that the heat produced is greater than that of alcohol or gasoline. It is also claimed that with a furnace of this kind it is possible to brase cast iron and that it will melt copper or nickel.

WHITE SEWING MACHINE CO., Cleveland—The White company exhibits through the White garage. Three cars are shown; a standard steam tonneau without top, a standard tonneau with top and side baskets and a limousine car. The cars are beautifully finished in two colors and attract much favorable comment. The first hour Manager Waite reported a sale of a limousine car. Above the exhibit is a miniature White car, outlined with incandescents. White carriages are presented to all ladies.

T. C. WHITCOMB AUTOMOBILE CO., Cleveland—This company is another newcomer in the field. It has northern Ohio for the Rambler, Ford and Royal cars. W. N. Booth & Co., sub-agents for these lines, with a new store in the east end, exhibit with the Whitcomb company. The Royal exhibit is really a space by itself with people from the local factory in attendance. It is handsomely decorated in royal purple and three machines are shown, a two-cylinder touring car and a four-cylinder car and chassis. In the Rambler line are shown the 8-horsepower runabout, single-cylinder tonneau, and 16-horsepower, double-cylinder touring car. There is also shown a Rambler motor cycle. In the Ford line is an 8-horsepower light runabout and an 8-horsepower light touring car.

WINTON MOTOR CARRIAGE CO., Cleveland—Through its retail branch the Winton company has an attractive exhibit in the center of the hall. The arrangement is plain but rich. A polished brass railing surrounds the stand. Four Winton cars are shown, one standard Winton touring car in maroon finish, one in canary finish with a top, a chassis standing over a large mirror, and Buell II, which stands in the center of the space and is constantly surrounded by admiring spectators. The canary finished car is new this year and is one of the most striking cars on exhibition.

WESTERN AUTOMOBILE CO., Cleveland—This is also a newcomer. Distinct from the Ohio Oldmobile Co., but under the same management, the company is handling the Franklin air-cooled car, and shows a four-cylinder runabout, and a four-cylinder car with tonneau. A 24-horsepower tonneau car is used for demonstration purposes.

**MOTOR AGE**

Published Every Thursday by  
THE TRADE PRESS CO.

1303 MICHIGAN AVENUE CHICAGO  
Telephone Calumet 2011

New York Office, 114 West 19th Street,  
London Office, American Publication Bu-  
reau, 10 Manor Park Rd., Wembley, N. W.

Entered at the Chicago Post Office as Second  
Class Mail Matter

Subscription, Two Dollars per Year  
Foreign Subscription, Four Dollars

Any Newsdealer may obtain Motor Age through  
the Western News Co., Chicago, or any  
of its branches, on a returnable basis

## TWO KINDS OF DANGER

**I**N THE 6 months ending June, 1903, 1771 persons were killed and 22,972 persons were injured on railroads in the United States. This means that the railroads of the country kill or wound 134 persons a day.

There are 41,225 locomotives in the United States according to the latest available interstate commerce reports. Then there is an average of over one death or injury per year for each locomotive in use. Suppose each automobilist in the country killed or wounded one person a year!

In July, August and September of 1903, 1,025 persons were killed and 14,162 persons injured on railroads in the United States. This is at the rate of twelve persons killed a day, or 166 persons killed and wounded each day on railroads.

The marked increase in injuries and fatalities is explained by a newspaper by the fact that such accidents are now much more fully reported than formerly.

It costs a life or a personal injury for over 19,750 tons of merchandise and for every 10,697 persons carried on railroads. This is the price of ordinary transportation by railroads. The net earnings of the railways are over 600 million dollars a year.

Railway accidents are to be deplored. It is to be deplored that railway trains thunder into large cities on grade lines crossing street after street that teems with children.

Many of the accidents on railroads might have been avoided by better general precautions for safety. Such precautions will soon be made necessary. Accidents will still happen and people will as now shudder and forget them.

The cost of the world's traffic be what it may the traffic must go on—unless it is by automobile.

The automobile is new. The man who is used to the locomotive's thunder and thinks himself a lucky fool, if after standing in the middle of a railway track jumps off just in time to miss death, is not used to the automobile's sputter and hears it is nothing but injury and death.

His forefathers heard the same disaster in the shrill screech of the little funny locomotives that started railroading.

There is nothing else in what is sometimes

called the unfriendly attitude of the public toward the automobile than the comparative strangeness of the new medium of travel.

People who get used to twelve deaths a day by railroads must sooner or later recognize the fact that an occasional deplorable accident in automobilizing does not make of automobilizing a menace to the human race. It would be well indeed if there were no accidents in anything, but it is useless to consider such a futile hope.

Accidents will always be. Automobilizing is not proud of its accidents. It stands as a means of travel which will eventually reduce the accidental deaths and injuries of traffic far below their present ratio in comparison to the total of work accomplished.

But just now when the public and the press howl and rave about its accidents it only points out that its accidents are not comparatively as great as the accidents of other means of transportation.

Forty thousand locomotives running on steel railroads in private highways kill at the rate of twelve a day.

Were the forty thousand automobiles of the country to kill at the rate of twelve a day every automobile factory in the country would be closed!

## AUTOMOBILE SHOWS

**B**Y THE first of April there will have been held in Europe and the United States about thirty automobile shows, of which twenty-three will have been in prominent cities.

Altogether from 600,000 to 1,000,000 persons will have viewed the automobiles for 1904. Consider that this would be equivalent to the same number of persons visiting one salesroom during a period of 30 weeks and one has a good idea of the prominence of automobile shows in the automobile industry.

But the prominence of shows as a factor of the industry is not so great a lesson as the prominence in the commercial world of a young industry which supports so many shows.

Ten years ago last summer at the world's fair at Chicago there were two automobiles on exhibition. Since then has grown an industry whose exhibitions of a winter attract a million persons.

Spread over Europe and America automobile shows have become the mecca of the automobilists and prospective automobilists of different lands and different sections. Their extent has crowded their places of holding.

The industry has become mighty even were the show the only index of its strength.

The infant has jumped from its cradle.

## WONDERFUL FORESIGHT!

**T**HE Motor World in thinking over the way in which Motor AGE has always been able to get out big show issues with considerable more rapidity than the Motor World, comes to the concluding conclusion that it must report the shows before they happen.

The eastern paper is slow. It should have gone on and consoled itself with the fact that last July Motor AGE was in the postoffice with the culbule story of the Gordon Bennett cup race 2 days ahead of any other paper, because, by its wonderful "acromancy," it guessed that Jentay would win the big event.

Also, it might have drawn the conclusion that by good guessing as to who would be able to complete the journey to Pittsburgh, Motor AGE was the only paper to print the story of the finish of the endurance last October in the

issue of the week of the finish of that test.

Next summer Motor AGE will be in the mails with the story of the Gordon Bennett race before any one other paper; and next winter it will be in Madison Square garden with the complete story of the New York show before any other paper.

There is no guessing or acromancy about it. Motor AGE has the best mechanical facilities, uses the telegraph, has a large staff and knows how to do it.

\*\*\*

Science has come forth as a supporter of the motor car as against the horse, by making the statement that the horse is seriously deteriorating the health of the cities. Dr. Louis Parkes, an eminent English authority on sanitation, says the evidences of the horse's presence on the streets, when dried and pulverized and blown about by the wind, are a fruitful cause of nasal catarrh, follicular tonsillitis, conjunctivitis—pneumonia, and other diseases of the respiratory organs. To the fact that the last year has been a healthful one is attributed by Dr. Parkes to the unusual wet weather, which prevented this material from becoming sufficiently dried and pulverized to produce its deadly effects. The universal adoption of the automobile is suggested by the doctor as a remedy for this unpleasant state of affairs.

\*\*\*

Some of the motorists of Sweden are endeavoring to arrange an international motor carnival on ice in Sweden in 1905. This country is regarded as being especially favorable, as there are three automobile clubs, and there are many lakes and rivers which would make ideal speed tracks, and which remain frozen solid for several months. Lake Malar, at Stockholm, is being favorably considered for a carnival, and an event of this kind there would attract motorists from all parts of Europe and perhaps some from America. Unique automobilizing seems to be the correct thing.

\*\*\*

One Lamberjack, of France, who would like to be known as an automobile racing man, was a witness of the record breaking races on the Florida beach course a few weeks ago. While there it was generally agreed that he was a very agreeable, modest sort of person. Not that he is back safely in his own dear Paris he has developed the habit of being interviewed on the subject of why he thinks the records made were bogus ones. It is strange what effect the climate will have on a man's moral courage.

\*\*\*

The Buffalo Automobile Club is going to build a club house with its share of the profits of the automobile show to be held in Buffalo next week. The club may get some good advice on how to make a club house a popular resort of the members by inquiring at 243 Michigan boulevard, Chicago.

\*\*\*

In whose interests are the eastern newspaper men who are so assiduously trying to amalgamate the American Automobile Association and the American Motor League working?

\*\*\*

Country automobilizing is only a few weeks off. Rural storekeepers are wondering how much they will dare charge for gasoline this summer.

\*\*\*

Nineteen hundred and five will be a side-door tonnage year.



# SPRING BRINGS MOTOR CAR RACE TALK

New York, Feb. 28—Under instructions from the race committee of the A. C. A. Secretary Butler will within the next fortnight and perhaps this week make a visit to Virginia Beach with a view of inspecting the course with regard to its availability for a speed and long distance test of the machines that have been entered for the American team in the international cup race. Alexander Fischer, American agent of the Martini, has placed a high speed car at Mr. Butler's disposal for the inspection and test. It is probable that A. R. Pardington, chairman of the racing board, will also be of the party with the idea of an inspection of his own to settle the question of the fitness of the course for race meets, for which sanction is likely to be asked. The candidates for the American team are also to be invited to go along. Actual speed tests will also probably be made by F. A. La Roche with his Darracq Blue Streak and L. P. Moores with one of the Peerless flyers. Harlan W. Waple may possibly try out his new Ball-mo-built flyer.

There seems to have been a clash of some sort among the factions that made up the Virginia East Coast Automobile Association; said to be between some of the Norfolk automobile clubs on the one hand and the Virginia Beach hotel people and land owners on the other. Accordingly yesterday there was a meeting held in this city at which a new organization was formed to conduct the meets. It will be known as the Virginia Beach Automobile Club and has for its officers: Alfred N. Chandler, Philadelphia, president; Sylvanus Stokes, Norfolk, Va., first vice-president; Thomas Y. Lillie, Richmond, Va., second vice-president; Lee Krans, New York, secretary-treasurer; C. E.

Lent, Philadelphia; H. M. Reinhard, Richmond, and C. H. Consolo, Norfolk, directors.

A study of the tides caused a change of the date originally proposed from May 17 to May 10. This will admit of 5 days of racing between 10 a. m. and 2 p. m. It is proposed to have four open and several match races each day and to follow the race meet with a carnival made up of an outdoor show, gymnastics, a floral parade and speed and brake tests of touring cars.

It has also been suggested that a 350-mile race be promoted in April—the beach is over 70 miles in length—to try out the candidates for the American team. If this test be acceptable to the A. C. A. racing committee it is proposed to run a preliminary open tournament in connection with it.

W. J. Morgan, manager of the Ormond meet, has returned from Florida. "The Senator" is proudly displaying a \$300 gold timing watch with chain presented him by the Florida East Coast Automobile Association in recognition of his services. On his arrival home he said he found awaiting him letters from Charles Jarrott and S. F. Edge. Both announced their intention of coming over this season for record trials on Ormond Beach and possible participation in some of the track meets.

H. S. Harkness is reported to have announced his intention of building another racer

with the idea of a try for the world's mile record on Ormond beach. The young millionaire is quoted as saying that the new car will have no extra parts, the differential being cut out of the running gear, and there being no springs. As already announced in an interview with a MOTOR AGE man, Mr. Harkness proposes to take the racer he built for last year's American team competition to Ormond on the occasion of this year's elimination trials for a mile trial. If the trials be changed to Virginia Beach he will probably make the attempt there instead.

The new automobile law of New York contains a provision allowing the supervisors of any county to grant permission for a speed trial on the roads within their jurisdiction. Under this Chairman Pardington, of the racing board, hopes to be able to get a permit for a race somewhere in the state to decide the ownership of the cup W. K. Vanderbilt, Jr., has offered the A. A. A. for a 300-mile race. The fact that Nassau county in the face of its strong anti-automobile prejudices gave permission for the A. C. A. to run its elimination trials at an early morning hour last spring and the fact that the tests were made without accident or complaint give encouragement that permission will not be difficult to secure, if not in Nassau county then in some other county. It is believed that hotel keepers, merchants and others in some county can be convinced of the advantages of holding such a race.

A. J. Picard, who officiated as starter at Ormond and many of the track circuit meets last year, announces that business demands on him as sales manager of the American Darracq Automobile Co. will prevent his holding the flag the coming season.

## METROPOLITAN

on Percy Owen and to attend to some matters in connection with the Boston show.

M. L. Bridgman, a veteran cycle dealer, is to enter the automobile business. He has leased a two-story brown stone stable at 20 West Sixtieth street, and has fitted it up as a garage. At present he will confine himself to storage, but contemplates later taking the agency for one or more cars.

A. J. Picard, who had charge of the Darracq exhibit at the Chicago and Detroit shows, is pleased with the results attained and the agencies he placed in both cities. "I succeeded in making the Darracq well known in a district which is sure to afford a fine market for imported cars. I incidentally managed to introduce the Darracq to several southern buyers as well."

George B. Adams, who has taken the New York agency for the Apperson, has established headquarters at 132 West Forty-ninth street. He has been kept busy demonstrating whenever the abnormally strenuous winter weather permitted.

As a result of its Mr. Duerr's visit to the Chicago show the Duerr-Ward Co. has added the Royal Tourist and the Mitchell to its Acme line. The Royal Tourists are exhibited next week and the Mitchells a few days later.

A phenomenally long list of orders booked for Pierce and Peerless cars makes Manager Wridgway, of the Ranker Bros. Co., one of the most cheerful men along automobile row.

John Wanamaker created somewhat of a stir on Friday by his liberal advertisement of his taking on the Premiers for the medium priced trade and of the coming of the 40-horsepower Premier for the swell demand. The latter, he says, will have mechanical inlet valves, honeycomb cooler, pressed steel frame, 36 by 3½-inch tires and 102-inch wheel base.

## GARAGES

They will rent seven, five in the townhouse, and will sell for \$4,000. Mr. Wanamaker will refer to his Fifty-seventh street station as a temporary garage, indicating that the intention of building a new and more elaborate one originally intended by W. D. Gash has not been abandoned.

Two importations of F. A. La Roche in the sundry lines are attracting attention. One is a spark plug, called the oleo, which is said to be much favored by French drivers, and the other is a speedometer, known as an auto-controller. The latter is the size of a watch and is attached to the front axle.

Homan & Schultz, the Rambler agents, are much better off than most of the dealers in Americans in the matter of 1904 models on hand.

Mr. Hollander, of Hollander & Tangeman, sailed Wednesday for Turin, Italy, to visit the F. L. A. T. factory with the purpose of hurrying shipments of F. L. A. T. automobiles and motos for speed boats.

Zero weather, including a big snowstorm, gave post-show retail business another setback in New York last week. Offers of fur coats, leather jackets and masks proved insufficient to induce possible buyers to go out for a demonstration ride. There was not so very much trade loss though, for most of the importers pretty well cleaned out their stock on hand at the show and the dealers in Americans are still complaining of delays in the receipt of the 1904 models.

## GOSSIP OF

Percy Owen, president of the New York Automobile Trade Association, says he proposes to call the attention of members to the state he which gives a lively stable owner the right, after keeping a horse or carriage without payment for 2 months, to notify the owner that he has a lien on it for storage charges. Mr. Owen very justly thinks that there should be a similar law enacted for the benefit of garage keepers to enable them to collect for unpaid storage, supplies and repairs and will have the association's counsel draw such a bill for presentation at Albany.

"As you have seen for yourself the last half hour," said E. B. Jackson, manager of the John Wanamaker garage, "there is a rush for the Ford cars, on which there is immediate delivery. We expect great things from the Premiers. The air-cooled models will begin to arrive within 2 weeks, but we do not expect the big 40-horsepower water-cooled cars before 6 weeks. We are now selling Type VIII Searchmounts, which have been fitted with Trent engines, at \$2,200. Mr. Wanamaker expects to erect before the season closes a big garage on upper Broadway."

Alexander Fischer expects to receive the first of the Martinis, which are made in Switzerland under Bochet-Schneider license and whose exclusive agency for this country he has secured, early next week.

Harry Fendick, manager of the Winton track in Boston, ran over last week for a call

# MOTOR CAR REPAIRING



MOTOR AGE

HAGMANN &amp; HAMMERLY'S GARAGE

One of the largest automobile repair shops in Chicago is located on the west side, on Harrison street near Oakley boulevard. This is the Hagmann & Hammerly Automobile Station, and it has grown from a little shop covering about 2,500 square feet to its present proportions of nearly 15,000 square feet.

The Hagmann & Hammerly plant has a frontage of 50 feet on Harrison street and is 170 feet deep. The front part of the building is two stories in height, 50 by 90 feet, while the rear part has three floors, each 50 by 50 feet.

The first floor, facing Harrison street, is used as a storage room, with the offices of the firm to the right of the entrance. In the rear is the wash room on one side with a large room which is used for storage in summer. The engine room has a 12-horsepower gas engine which runs a dynamo with a capacity of eighty lights.

The second floor in front is used as a machine shop, as is also the rear room of the same floor. A large elevator carries cars to the second floor. In the rear shop there are two lathes, three drill presses and other machinery necessary for making automobile repairs. The firm carries a large assortment of patterns, so that parts of almost any automobile can be duplicated, in many cases before the part could be obtained from the factory. The tool room has a complete assortment of taps, dies, reamers and drills from No. 60 to 2 inches in diameter. The third floor is used for storage and as an auxiliary repair shop.

The Marr is the only car for which the firm has the agency, but second-hand cars of various makes are offered for sale. An air compressor and an automatic muffler cut-off, for which patents are pending, will shortly be put on the market by this firm.

In discussing the subject of repairing automobiles, Mr. Hammerly said: "A repair man who has not been thoroughly schooled and fitted for this special line of work places his customers in a position of uncertainty. After having paid for adjustments of repairs the customer finds that little has been done and no benefit is derived. No boys or incompetent workmen should be allowed to fit or adjust

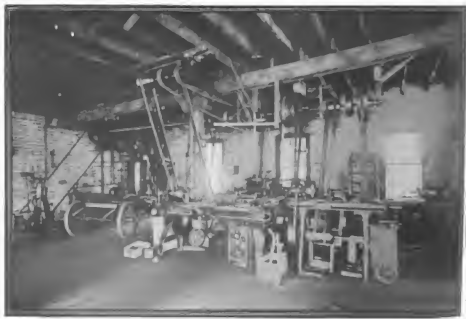
the delicate parts of a gasoline system, for no business will succeed with continued complaints of incompetency. Customers demand quick service, and only a strict supervision of all de-



MOTOR AGE

THE H. &amp; H. STATION

partments and close attention to each customer's wants will keep the confidence necessary to success in such a business as this.



MOTOR AGE

THE MACHINE SHOP

"The matter of supplying extra parts for emergency cases is not within the power of the repair man to control, except on rush order or by a good financial standing with the supply house. The public overlooks the fact that in the busy season work promised is subject to arrival of parts ordered, often from a distant point, and should other machines come in for repairs, they too must be taken care of although appearing to delay work already under way. The repair shop is not for those who consider they are always first, but for all who need the services of an expert mechanic. Much valuable time is wasted on those who expect the repair man to deliver up his knowledge of sparking devices, carburetors, commutators, coils, etc., to those who are intelligent in their own profession but do not absorb learning in so short a time as to grasp a mechanical system like that of the gasoline motor by simply listening to a few off-hand comments.

"A matter often causing dissatisfaction to an owner after ordering repairs contrary to the advice of an expert, is to have the job prove unsatisfactory, resulting in refusing to pay for the work. The best safeguard against this unpleasant state of affairs is to have the owner sign an order for repairs. This would protect all concerned.

"The repair man, by securing an agency for an automobile may add to his net income. The machine should be attractive and reliable and the price within the reach of all who appreciate an honest and simple machine. The tendency to handle high priced cars leaves the repair man too little time to properly keep in touch with his customers. The demand for second-hand machines should be a feature of profit, as these can be overhauled at odd times. The outlook for 1904 is good, and for the repair man with a well equipped shop and competent workmen there should be no reason why success should not follow in sections bordering on the boulevards or the strictly residence portions of the city."

## BINGHAMTON HAS IMMENSE GARAGE

With a population of 45,000, Binghamton, N. Y., has 130 automobiles, and it is recognized as one of the leading automobile towns of the state. The establishment of R. W. Whipple, recently completed, is in keeping with



ELEVATOR ROOM OF REPAIR SHOP

the spirit and surroundings of that city. The Whipple building fronts on Washington street with four stories, having five stories on Water street. The front is of pressed brick and Indiana limestone trim, having plate glass on both first and second stories, extending on both instances from floor to ceiling with warely any window sill or ceiling rail.

The building has a frontage of 60 feet and is 106 feet deep, containing about 33,000 square feet of floor space. The basement door opens from Water street, and the basement is covered and drained, forming one large wash rack. The first floor has its entrance on Washington street. All carriage floors are laid of hard wood, quarter-sawn and laid diagonally, so that no flooring can be slipped. The show room is ornamented with an elaborate design of steel tiling and partitioned with glass. Large plate glass doors form the street entrance to this room, though no carriages are allowed to use this entrance.



ANOTHER PART OF THE GENERAL REPAIR SHOP

rack is on this floor within easy access to an elevator 8 by 16 feet, running from the basement to the top floor. Gasoline, oil in cabinets, greases, carbides, etc., are handled in a separate steel building connected by passage direct from the wash rack, and the gasoline is buried in the ground in 10-barrel tanks.

The second floor is an auxiliary show room, utilizing the second floor plate glass windows. The rest of the floor is used as a repair shop. It is fitted with pits with trap doors in the floor, overhead traveling cranes, two separate power plants, screw cutting lathes, high speed drill presses, and everything necessary for working metal and wood. This floor also is used for a stock room for automobile parts. A line of naphtha launches is carried in this department.

The third floor is occupied by the City Club and the fourth floor is used to store second-hand carriages, of which there is a considerable stock on hand.



MOTOR AGE

THE ENGINE ROOM

To the right of the main entrance is the reading room, where automobile literature is kept on file. The general and private offices are still further to the right. At the extreme right is the garage entrance. A large wash

## ALL ROADS LEADS TO ST. LOUIS

New York, March 1—The first meeting of the new board of directors of the American Automobile Association was held here today and a new racing board was chosen. This consists of A. R. Pardington, chairman; W. K. Vanderbilt, Jr.; O. W. Bright, of New York; Samuel Butler, William Wallace, of Boston; George Weiss, of Cleveland, and F. C. Donald, of Chicago. The technical advisers are A. I. Riker, of Bridgeport, Conn., and E. T. Birdsell, of New York. The retaining of Chairman Pardington was unifying all around.

On account of the great interest of automobilists in automobile racing, and on account of the likelihood of numerous speed contests this summer, a special automobile hot committee was appointed to confer with the Power Boat Association regarding the control of speed boat racing. This committee consists of A. R. Pard-

### GENERAL AUTOMOBILE TOUR TO THE WORLD'S FAIR MAPPED OUT

Erie Monday, August 1. There will then be night stops at Erie, Pa., Cleveland and Toledo, O., Waterloo and South Bend, Ind., Bloomington and Alton, Ill., where the general rendezvous will be made with the parade into the St. Louis fair grounds the next day.

The tour of the New England party will start from Boston July 25, proceeding by daily stages through Springfield, Mass., Albany, Utica and Syracuse, N. Y., to join the New York division at Buffalo.

The southern division will start from Baltimore, Md., July 26, proceeding by Gettysburg, Bedford and Conneville, Pa., to Pittsburgh where the Sunday stop, July 31, will be made. Monday the division will proceed to Youngstown, O., and then to Cleveland

### WORLD'S

### FAIR

ington, Peter Cooper Hewitt and L. R. Adams, and is to report a month. It is probable that there will be a permanent automobile hot racing board, separate from the regular racing board.

The gathering of the clans at the St. Louis fair this summer was given its first definite preparation by the appointment of a St. Louis tour committee, consisting of Augustus Post, of New York; Frank X. Mudd, of Chicago; H. W. Smith, of Syracuse, N. Y.; C. E. Gladden, of Boston, and R. P. Scott, of Baltimore, Md. Cleveland and St. Louis members of this committee are yet to be appointed.

It is the intention to boom this tour and subsequent tournament early and late and make of it a mammoth advertisement of automobile strength and of the good roads cause.

The encampment at St. Louis is scheduled to begin August 9. The tour of the New York party is to start Monday, July 25, and

Tuesday, to meet the New York and New England forces.

A central section party will start from Columbus, O., on August 4, proceeding by way of Richmond, Indianapolis and Terre Haute, Ind., Penna and Alton, Ill., to the rendezvous. It is planned that there will also be special tours direct to the rendezvous from Minneapolis, St. Paul, Denver, Omaha and Kansas City. In all cases the motorists will register at the night controls that those who cover the route may receive certificates.

The board of directors also appointed a law committee, it being James B. Hill, of New York; W. H. Hotchkiss, of Buffalo; D. Leary, of Boston, and A. P. Fleming, of Los Angeles, Cal. A Chicago member is yet to be appointed. The highway committee appointed is Augustus Post, of New York; Asa Goddard, of Boston, and Emerson Brooks, of New York.

## MAY LEASE CLUB HOUSE

### The Automobile Club of America Is Considering Advisability of Taking Magnificent Establishment

New York, March 1.—Agitation in the matter of a club house for the Automobile Club of America is likely to be again seriously started by a movement on foot to lease the magnificent club plant built by the Manhattan Athletic Club at Madison avenue and Forty-fifth street, and more recently occupied by the Knickerbocker Athletic Club. The house is now the property of the Iselin estate and has been unoccupied for over a year. Its last tenant was the Knickerbocker club, which was run on a proprietary basis by Mr. Ballantine, who preceded the Iselin estate as the owner.

The house is a magnificent four-story, rough brown stone structure, 125 by 125 feet, and is equipped with spacious swimming tank, gymnasium, billiard room, bowling alleys, dining room and all the other conveniences of the modern athletic club. With it as its headquarters the A. C. A. would have the finest automobile club house in the world. The bicycle room and bowling alleys could be converted into a storage room, or by putting in an elevator the gymnasium might be utilized as a garage. An entrance now existing on the street level would furnish convenient ingress to the bicycle room, which might be used for transient storage. Altogether every desirable equipment of such a club is practically already at hand.

The present membership, which has already reached its limit of 400, would, as a matter of course, be insufficient to support such an expensive club plant. To secure the fourfold increase in membership required to assume the heavy expense of maintaining such a club house the club would have to be run on broader and more democratic lines than at present, and its roll would have to be thrown open to all automobilists of repute and respectability and the so-called social exclusiveness aimed at to some extent now be abandoned. A membership similar to that of the great national clubs of Great Britain and France would make the club house scheme practicable. Such a membership, it is pointed out, could easily be secured with such inducements offered to the automobilists of the metropolitan district, to which a great non-resident membership could easily be added with the conveniences the club would afford for transient use and as a lodging place during visits to the city.

When the club house scheme has been suggested in the past the conservative element in favor of a continuance of the present policy has opposed it and argued that the members for the most part already belong to the city's big social clubs and desire nothing beyond the more meeting place the present accommodations afford.

#### WILL HAVE CLUB ROOMS

One of the incentives used to stimulate attendance at the Buffalo automobile show by the members of the automobile club and their friends is that a goodly portion of the profits derived from the show will be used in furnishing and decorating the new club rooms now being prepared at 59 Franklin street. These rooms will be ready about May 1 and will be opened by a club smoker. The first

night of the show, March 7, will be club night and there will be features of special interest to the members.

The new club rooms will have a large assembly and reading room in front, with the secretary's office and committee room adjoining, while in the rear will be a card room, coat room, lockers and toilet rooms for ladies and gentlemen. It is the intention to make this the automobile headquarters not only for members of the club, but also for out-of-town visitors.

#### REFERRED TO COMMITTEE

New York, March 2.—At the meeting today of the executive committee of the National Association of Automobile Manufacturers the matter of changing the dates of the New York show from January to December was taken up but without definite action. While the arrangements with the Madison Square Garden Co. for holding the show in January have already been made, the change is possible if desirable, and there is considerable sentiment in favor of it among the members of the trade. To determine definitely the desirability of such a change as well as the further proposed change of making the show open on Thursday and close the following Thursday, instead of extending from Saturday to Saturday as customary, a committee was today appointed. It will report at the next meeting of the executive committee.

The proposed general automobile tour to the St. Louis world's fair under the auspices of the A. A. A. was approved and hence it was decided not to hold a N. A. A. M. endurance run the coming summer. Members of the association will be requested to support the tour heartily, whereby this gathering of the motorists at St. Louis becomes in reality the gigantic co-operatively managed tour originally suggested by MORRIS AUE.

A committee was appointed to endeavor to obtain a reduction of freight rates on automobiles shipped to the world's fair. The Standard Motor Construction Co., successor to the U. S. Long Distance Automobile Co., was reinstated to the membership previously held by the latter company. J. Wesley Allison was elected secretary of the association to succeed A. B. Tucker, resigned.

#### SPRINGFIELD TO HAVE A SHOW

Springfield, Mass., Feb. 29.—The Automobile Club of Springfield claims reason to be proud and highly gratified in the manner in which exhibition space in the Springfield city hall has been taken for the coming show. The floor plan of the hall shows but few spaces still remaining and negotiations are in progress for these. This state of affairs insures the club against losing money upon the venture, the expenses being now assured. It is claimed, and with reason, by the show committee that a small show like this one will afford better opportunity to the prospective purchaser of an automobile for making a selection than the immense shows of the big cities. The latter, by their numberless variety, confuse the observer and may prevent judicious choice. In this local show there will be sufficient variety of types to give good selection, but not enough to make the result confusing.

The Road Drivers' Association of New York has invited the governors of the A. C. A. to witness its annual speedway parade in May.

## ALMOST AN EVEN BREAK

### Oldfield and Hauseman Entertain the People of Savannah with Samples of Going on a Rough Track

Savannah, Ga., Feb. 26.—After being twice disappointed by postponement, the people of Savannah were permitted yesterday to see a trial of speed between Barney Oldfield with the Winton Bullet and E. A. Hauseman with the Ford 999. The unusual motoring enthusiasm prevailing here, combined with the natural curiosity of the people to see the cars and driver that have been the subject of so much newspaper comment, brought out a crowd of nearly 3,000 persons when the races were definitely arranged.

While the time made yesterday was not even in the neighborhood of world's records, it was sufficiently fast to thrill the southern folk, and fair women, gallant colonels and dusky cotton pickers alike cheered the drivers as their big machines thundered around the course which so long has been sacred to the high-bred trooper.

There were three heats on the program for the afternoon and the fastest time was made by Hauseman in the second heat, when he made the mile in 1:05. The track was rough and there were several minor mishaps which kept the Ford thermometer from going below freezing point.

The first breakdown occurred in the first heat. Both Oldfield and Hauseman were off to a good start with Hauseman a little in the lead. He widened the space to about 100 yards and was rapidly drawing away from Oldfield, when something went wrong and Oldfield quickly overhauled him. The crowd cheered, not knowing that anything had happened until Hauseman came to a dead stop on the back stretch. In accordance with a previous agreement the machine crossing the wire first was entitled to the victory for that heat, and Oldfield was declared the winner of the first heat.

A quarter of an hour elapsed before the second heat was on. Hauseman again got away first and went flying along at such a pace that the spectators rose and cheered lustily. Just as the machine passed by the gate nearest the stands it swerved slightly and screams went up from those near the fence. The wheels dashed into a small puddle of water and a dozen or more people were covered with mud. It was all done so quickly that they thought for an instant they had been hit by the machine.

As both machines were not in good condition it was decided to finish the contest with a 1-mile dash, which Oldfield won by getting off to a full flying start and forging ahead nearly a sixteenth of a mile before Hauseman got his machine in good pace. The final mile was made by Oldfield in 1:10.

The meets go from here to Macon, where they will contest Tuesday afternoon for the edification of the Minonites.

#### AUTOMOBILING ON LAKE ST. CLAIR

Detroit, March 1.—Russell A. Alger, Jr., one of the leading spirits in the Packard Automobile Co., and a well known local automobile enthusiast, performed a feat last Saturday which has excited much interest among automobile men when he crossed from the mainland to St. Clair flats over the ice of Lake St. Clair in a 1904 Packard touring car.

The drive was undertaken as the result of a wager made by Mr. Alger. Accompanied by Mrs. Alger he drove up to Bingham's Lakeside inn about 1 o'clock in the afternoon, and after ordering lunch calmly announced that he wanted to drive over to the flats, about 9 miles, and wanted a guide who knew the currents in the lake to precede him in an ice boat, to keep an eye out for air holes.

Peter Vanderbush, who knows about all there is to know about Lake St. Clair, was secured and a little later the odd procession started off. Vanderbush going ahead in an ice boat to see that the track was clear and solid and Mr. and Mrs. Alger following in Mr. Alger's touring car.

The trip was made entirely without incident. The severe winter has put a heavy coating of ice over the lake and Mr. Alger had no difficulty in reaching the Old Club, at the lower end of the flats. On the way over Mr. Alger drove carefully, on account of the danger of running into an air hole.

Once started for home there was a different story to tell, however. Mr. Alger had the tracks of his car to go by and he opened the machine up. For a few minutes there was a nice little race between the ice boat and the touring car and then the ice flyer had to take a back seat. By the time Vanderbush had reached the mainland Mr. Alger had started for Detroit, having made the 9 miles across the ice in just 22 minutes.

#### BUFFALO TRADE GOSSIP

Buffalo, N. Y., Feb. 29.—Everything is in readiness for the Buffalo automobile show, which opens Monday next. There is only the Sunday between the Cleveland and Buffalo shows and many of the exhibits will be expressed from the former show for the affair here. The St. Louis cars were shipped by freight here directly after the close of the Chicago show, but Hafer & Meadows, the agents here, are still looking for them.

Early in the fall J. A. Cramer accepted the agency for the Toledo, but on account of taking on the Ford, an unlicensed car, he was compelled to drop the Toledo. For some reason or another there is a whole lot of secrecy in the matter. It is believed, however, that some Tonawanda people are interested in the agency. Mr. Cramer has, however, reserved space for the Toledo agency at the Buffalo show.

Henry & Mabbitt, who took the agency for the Wolverine car at the New York show, have decided to drop it and the business for this year.

The Hayes Automobile Co., so far as Mr. Hayes is concerned, is also down and out. Mr. Hayes has large interests in Cuba and hereafter will be away most all the time and consequently will have no time to devote to the automobile industry. His right hand man, George Andrews, will, however, in all probability continue the business, but whether he will retain the Locomobile office is not settled.

The Buffalo Garage Co., which handles Thomas automobiles, motor bicycles and motor boats, has taken on the agency for the Prescott steam car.

Ephraim Press, having secured the store 557 Main street, and will take possession next Monday with the Elmore agency. They will also handle the Continental tire and automobile sundries.

The older firms all have about the same lines carried last year.

## CONSTABLE'S RARE LUCK

### Automobile Left In His Charge 6 Months Ago; Owner Never Came Back - Hartford Trade Doings

Hartford, Conn., Feb. 29.—Constable Charles Hall, of Rocky Hill, bids fair to enter the ranks of motorists and the news will be welcomed by those who have dared to drive fast over the Hartford-Middletown highway in years past and who have been held up by the local constabulary. The ownership by the constable of an automobile is peculiar and the transaction could hardly come under the head of regular.

Last fall two New York motorists became stuck in the town. The mixture didn't work or they didn't get any spark. The car refused to budge. It was raining and near night when the car was pushed up to the barn of Constable Hall, where the owners asked permission to leave it for the night. The constable granted the request. Six months have elapsed and nothing has been heard of the motorists. All this time the car has remained in the constable's barn, where it has been the object of curiosity from all the countryside.

When the owners took their leave they did not give their names or addresses, nor were they known to the people of the town. Immediately after leaving they took their departure from town by the steam cars and nothing has since been heard of them. Further than that the car is painted a flaming red and that it is of the gasoline type, Constable Hall has nothing to say, declaring that any who claim the property must prove it satisfactorily as theirs. During the winter the constable has given gasoline engines his attention and has been studying the motor while drives a water tower pump of one of his neighbors. He has got the machine so that it will run and report has it that he will use the car during the coming summer if it remains in his charge, while the owners, if they claim the car, will have to pay him a considerable storage bill. The constable wears the smile which is non-removable and declares that in any event he wins.

The Electric Vehicle Co.'s two-cylinder 12-14 horsepower car is more than realizing the expectations made of it in the exhaustive tests which have been in progress with the first lot of cars to be assembled, according to report. The road tests given the cars are most severe and every demand made upon the cars is being realized. The officers and engineers of the factory are much pleased with the results and the sale is now large, so that indications are good for the success of the car.

L. H. Elmer, agent for the Rambler in Hartford, Middlesex and Tolland counties, sold a model K car to Dr. John Palmer, of New London, during the week. Elmer has now practically sold all the cars of his original order and is negotiating for more cars for early delivery.

An order for five forty-passenger electric coaches for sight-seeing use, has been placed with the Electric Vehicle Co. and work has begun. The cars will be ready for delivery for the summer riding season. It is said they are to cost in the neighborhood of \$4,000 each.

The managers of the Montville Street Railway Co. in the eastern part of the state are considering the establishing of a motor car extension line. The Pequotuck experience of the Bristol and Plainville Tramway Co. is be-

ing watched, and if successful the Montville company will then establish the same service. The Pope Mfg. Co. has made an announcement which will be welcome to women drivers of electric automobiles. The Waverley type which has been a popular seller at \$450 of the piano box runabout design, is to be sold in Hartford for \$500. Thirty cars are to be shipped from the Indianapolis factory of the company to Hartford. It is expected this number of cars will be readily disposed of.

Though the weather has been frightfully cold and the roads most difficult to travel on, 10 miles being the limit of speed, Laurence Duffie has been driving a big new Columbia car all the week about the city. On Thursday the water was so deep in the country districts that it carried into the motor and bad holes were everywhere met. Duffie continued to drive, however. Friday the temperature dropped below zero.

One of the most unique automobiles of the electric type is being put through the factory of the Electric Vehicle Co. and is for Mr. E. S. Gold, of New York. It resembles a gasoline tonneau, has double chain drive, a bonnet forward, wheel steer, emergency brake lever, and every feature to make it impossible to easily distinguish it from a large size gasoline vehicle. Under the bonnet is located the greatest number of battery cells, although a small number will be located under the forward seats.

#### NEW LIMOUSINE COMPANY

Chicago, Feb. 29.—The Limousine Co. of America, which recently went into the hands of a receiver, has been succeeded by the Limousine & Carriage Mfg. Co., with O. C. Graff as manager. Mr. Graff has been in the employ of C. P. Kimball & Co. for the past 15 years, where he was in charge of the body building department. The new company will also do all kinds of carriage and automobile repairing and will make special designs if desired. The company will be located at the old stand, 542 Wabash avenue.

The Chicago branch of the National Association of Retail Automobile Dealers met last week and received a draft of a constitution which has been taken under advisement. At the next meeting officers will be elected. President Ollier will call a meeting of the national association in the near future.

The Apperson Bros. establishment on Wabash avenue has been thoroughly overhauled and the rooms put in attractive condition for the spring business. C. J. McClain and Jack Fry are in charge.

The Cadillac Co. of Illinois has taken the agency for the Clement car.

President John Farson, of the Chicago Automobile Club, entertained Augustus Post, of New York, last week. Mr. Post is chairman of the roads and tours committee of the American Automobile Association, and he is now at St. Louis interviewing the world's fair officials in regard to the automobile run to the fair next summer.

The directors of the Chicago Automobile Club, with its attorney, Sidney S. Gorham, will meet with the law department of the city next week to consult and arrange for an ordinance governing automobiles in the city. Corporation Counsel Tolman and President John Farson are both out of the city at present, and the date of the meeting cannot be definitely decided until they return.

## EXPORT FIGURES GROW

### Over a Million Dollars Represented in American Automobiles Sent Out in the Past 7 Months

Washington, D. C., Feb. 27.—The bureau of statistics of the department of commerce and labor has prepared a comprehensive statement of the exports of various American manufacturers, showing countries of destination, during the fiscal year ending June 30, 1903. Among other things, it is shown that the total exports of automobiles during this period were valued at \$1,207,065. The shipments of automobiles to the various countries during the fiscal year were as follows:

Europe—Austria-Hungary, \$1,850; Belgium, \$3,670; Denmark, \$4,431; France, \$98,029; Germany, \$30,798; Italy, \$8,200; Netherlands, \$10,164; Portugal, \$12,004; Russia, on Baltic, \$813; Russia, on Black sea, \$975; Spain, \$1,506; Sweden, \$1,226; Norway, \$2,500; Switzerland, \$3,060; United Kingdom, \$670,811.

North America—Nova Scotia, \$2,916; Quebec, Ontario and Manitoba, \$130,515; British Columbia, \$3,155; Newfoundland and Labrador, \$2,025; Mexico, \$24,783; British West Indies, \$4,948; Cuba, \$11,345; French West Indies, \$800.

South America—Argentina, \$6,588; Brazil, \$6,900; Colombia, \$148; Ecuador, \$10,921.

Asia—Chinese Empire, \$5,200; British East Indies, \$15,032; Dutch East Indies, \$2,544; Hongkong, \$1,600; Japan, \$13,737.

Oceania—British Australasia, \$48,078; Philippine Islands, \$3,085.

Africa—British South Africa, \$59,048; Canary Islands, \$260.

Recapitulation—Europe, \$853,437; North America, \$180,487; South America, \$24,557; Asia, \$33,113; Oceania, \$51,163; Africa, \$59,308.

While figures are generally dry reading, the above compilations, showing as they do the relative strength of all the countries of the world as purchasers of American automobiles, are worthy of careful perusal by every manufacturer who is interested in foreign trade.

According to the latest compilations of the department there was a decline in the value of the exports of automobiles during January last as compared with the same month a year ago, the figures being \$59,535 and \$114,374, respectively. During the 7 months' period ending with January, however, there was a big gain in these exports, the value for the last 7 months being \$1,014,124, as compared with \$602,999 for the 7 months of 1903, and \$394,682 for the same period of 1902.

## BOSTON IS ALL SHOW TALK

Boston, Feb. 29.—New models of cars intended for the Boston automobile show are being received. The high grade vehicles of the Pope company arrived during the week, as did also two models of the Autocar.

John L. Snow, of the Peerless company, drove a 24-horsepower Peerless touring car from Boston to Providence, last week, a distance of 45 miles. The roads were in miserable condition, and the trip required the greatest of patience and forbearance on the part of the driver, as shown by the fact that the last 20 miles of the trip took 5 hours. However, despite the great hanks of snow and the ice-covered roads, the party reached Providence with the motor and car in fine shape.

J. H. MacAlman, of the Locomobile company, made a strike during the week. With deep snow on the ground he disposed of two of the steamers built by his company. Mr. MacAlman is making extensive preparations for the show, and will reproduce the exhibit made by his company at New York and Chicago.

Harry Fosdick, of the Winton company, leaves Boston Tuesday for Cleveland to attend the show to be held there next week.

The National company is to establish a branch house here in Boston. Mr. Barney has been appointed resident manager, and expects to open here in a week or so, at any rate in season to exhibit at the show.

There is every reason to believe that during the week of the show there will be more or less record work attempted. The majority of the out-of-town exhibitors who have heard so much about the Commonwealth avenue hill-climbing record have determined that when they leave Boston they will carry with them what is considered as the blue ribbon record of Boston and vicinity. Three New York exhibitors, who are handling cars of foreign construction, have announced that they propose to break the records. The committee having charge of the exhibit, being anxious to entertain visiting exhibitors in a manner befitting the occasion, has arranged for the holding of a smoker on Tuesday evening of the show. The smoker will be held in Potter hall, commencing at 11 o'clock and will continue for several hours. This will take the place of the dinner of a year ago, and will be less formal, speech-making being barred.

The Massachusetts Automobile Club has decided to hold an automobile race at the Readville track on Memorial day, when it expects to repeat its success of a year ago. A committee consisting of George R. Gilman, W. E. Eldridge, William Wallace and Allen Clapp has been appointed to arrange for this meeting, and also to make arrangements for the holding of a hill climbing contest April 19.

## LONG AUTOMOBILE RAILWAY

Portland, Ore., Feb. 24.—An automobile line is being planned here, which, if established, will give Oregon the longest and one of the most remarkable automobile railways in the world. The proposition is to build an automobile freight and passenger line by the Columbia Southern railway, between Bend and Burns, to connect with the extension of the railroad to the latter place. Freight motors capable of hauling 12 tons and passenger cars for twenty persons are to be operated, giving a daily service between Burns and Bend. This means freight from the interior of the state that now requires 6 days for moving to a railroad can be delivered at Portland in less than 2 days, and passengers can reach here in 24 hours. This line will open a country that has long suffered from lack of transportation, and it will serve the purpose almost as well as a railroad.

## LESSON IN ROAD MAKING

A convention will be held at the chamber of Commerce in Erie, Pa., March 16 and 17, under the auspices of the officers of the New York and Chicago Road Association. Notable speakers and practical road builders will attend, together with representatives from towns along the route. It is the purpose of the association to build an object lesson road, which will be used to educate the people by showing them that the best is the cheapest in the long run.

## BUNCO GOTHAM AGENT

### Scheme to Work Automobile Dealers —Percy Owen Nearly in the Spider's Web, But Escapes

New York, Feb. 28.—The bunco man has chosen Autoland for a stamping ground. He comes with a brand new game—clever, plausible and likely to catch even a wise one. Even Percy Owen, well up in the wiles of this wicked city, confesses that his escape was a narrow one. It is hinted that a similar game was tried on another local dealer. It is whispered that he far from escaped unscathed. This is the story Percy Owen told a MOTOR AGE man:

"The other day a middle-aged man, whose general garb and mien were in keeping with his line of conversation, came in accompanied by a companion or retainer. He introduced himself as Charley Dwyer, the turfman, owner of Africander, and said he had been commissioned by Fuller, the jockey, then riding at New Orleans, to buy a touring car and engage a chauffeur for him. Fuller, he said, expected to return in a day or two, would put up at the Plaza, and wanted the car to carry him to the training track at Gravesend early in the morning. In the most natural way possible he spent an hour discussing the car, its machinery and its merits, and finally said he would make the necessary deposit as soon as he could communicate with Fuller and get a check from him. He interspersed his talk with horse as was natural. He showed me what he declared to be the plans of the new clubhouse at the Jamaica track and spoke of the big money Fuller made as a jockey. There was nothing to arouse suspicion.

"After hiding me get the car ready and engage a chauffeur he shook hands and went toward the door. He returned, though, and informed me that he had taken up a lot of my time, that I was a good fellow and all that sort of thing, and that he wanted to put me next to a chance to make a little money. He said he was going to start a horse named Rocket at New Orleans that day for a sure thing, and that he was going to put a couple of thousand on him himself and asked me whether he should not lay a hundred for me.

"I told him I didn't follow the races beyond making a little bet on Suburban or Futurity day and I didn't care to risk a hundred.

"All right then," he replied "go out to a pool room and lay a ten shot yourself."

"I told him I knew of no pool room. Then he told me of one at Fifth avenue and Twenty-eighth street. I said that was too far to go.

"My man will go there for you," he remarked as he left.

"An hour later the retainer returned. In the meantime I had looked over the entries and saw there was a horse named Rocket among the starters.

"Here's a ticket on Rocket," said he.

"What ticket?" I asked.

"The ticket Mr. Dwyer told me to buy for you," he replied.

"But I don't know Mr. Dwyer," I replied, intuitively, having got suddenly wise.

"All right, then," he said, "Mr. Dwyer will take the ticket," and moved toward the door.

"I told my office boy to follow him. He met 'Mr. Dwyer' around the corner. The pair walked up Broadway and entered a saloon.

"I tell you this by way of warning to the

boys. Some of them, elated at the prospects of a sale to a noted jockey, through a prominent turfman, might think it up to them to be sports and good fellows under the circumstances and so get nipped for a ten spot or more. Apparently the buxom fraternity has decided that automobile tradesmen have plenty of money and spend it freely."

#### SYRACUSE FACTORIES BUSY

Syracuse, N. Y., Feb. 29.—All of the local automobile factories, with the exception of that of the Century Motor Vehicle Co., which is closed, are being worked to their utmost capacity. Edward C. Stearns, president of the Stearns Steam Carriage Co., predicts a large business for his company this season and says the plant is being run with a complete force of men.

Several changes have been made in the J. S. Leggett Mfg. Co., J. S. Leggett now being president and treasurer. The company's factory was reopened February 1 and new men are being put to work continually. Mr. Leggett says the outlook is first rate for a big season. This company is now putting into the market a four-cylinder, 15-horsepower touring car with direct or chain drive. The machine is known as the Iroquois. The company has also begun the manufacture of automobile bodies.

What is to become of the plant of the Century Motor Vehicle Co. is not known, although local manufacturers are of the opinion that it will be closed up. They say it is well fitted for a machine shop or the making of automobile parts, but that it is not complete for the purposes for which it was intended. The machinery cost about \$50,000. A movement was on foot at one time to unite the Century and Leggett companies and make the bodies at the latter's factory, but the deal fell through owing to the liabilities of the former company.

The R. M. Cornwall Co. has opened a retail store at 416 South Salina street, having the agency for the Toledo, Winton, Olds and Baker.

Bernard Stire and Arthur J. Brewster, the former a chemist, have formed a co-partnership and under the name of B. Stire & Co. are manufacturing Stire's hand cleaner, which is taking well with automobilists and automobile manufacturers. It is in the form of a paste and when spread over the hands and washed off takes with it all grease, paint or other foreign substance.

#### TRADE AT NIAGARA FALLS

Niagara Falls, N. Y., March 1.—Last year W. H. Davey did a very good automobile business here. He was the agent for the Pierce and sold a number. He also did a repair business. In fact, Davey had matters automobiling pretty much his own way. Last fall, however, he got into serious trouble and whether justifiable or not he is now serving a term in state's prison. Harris & Wilson took up the business where Davey left it and will look after the Pierce interests this season. They will endeavor to dispose of some Orion backboards. It is also the intention to use the little backboard for a parcel delivery on a small scale.

G. & J. M. Rae, the well known sporting goods firm on Falls street, have decided to embark in the business and have secured the Rambler agency. John Tagley, a popular young business man, is interested with the Rae people.

## FRENCH TRADE METHODS

### Industry Divided Into Four Classes, and Several Sub Classes—American Methods Are Employed

According to J. W. Bonnet, a French automobile dealer, the automobile industry in France is divided into four different classes—the manufacturer, the direct agent, the sub-agent and the customer.

The manufacturers are divided into those making automobiles exclusively and those who have added this industry simply as a side line. At present, most of the well known cars are manufactured by makers belonging to the first class and the prices of these machines vary between \$2,400 and \$7,000. Racing machines are not included and generally cost between \$5,000 and \$10,000, according to the power.

Among the exclusive manufacturers there are many cheap machines, which are generally termed "hardware," if not "junk;" they have cheap equipment and are built without special purpose, except to make as many as possible, notwithstanding quality.

The direct agent, when located in a large city like Bordeaux, Lyon, Toulouse, or Marseilles, generally carries two lines of automobiles, one of cheap motor cars and the other of the better class. An agent generally has a territory covering from six to ten departments, which are similar to counties in America. The agent usually places his orders for fifteen to thirty cars of each make, of course, according to his means and the prospects for sales. Most of the time he is required to pay one-third cash when placing the order and, as but few agents are wealthy, they can seldom order as many cars as they would like.

The direct agent, who has a large territory, that is, from six to ten counties, is not in a position to attend, as he should, to his business all through these counties, and for this reason always appoints sub-agents in the capital of each department and sometimes in several towns where there are a great many in the department or county.

This sub-agent receives one-half or two-thirds of the regular commission which the direct agent receives from the manufacturer and which seldom amounts to 12 per cent. Thus the profit on the sale of cars is not so great as the general public often thinks. On the other hand, the general and sub-agent usually derive a good revenue from the sale of accessories and parts, and from repairing cars.

The customers, which are, in fact, the most important people in the trade, are divided into two different classes. There are those who want first class machines, the best and expensive ones, and those who would rather have automobiles at moderate prices. Naturally the wealthy people are those who buy the most expensive cars, while those who generally do not know much about automobiles are in the market for the popular priced cars, which cost from \$700 to \$2,000.

Some of these cars, even in the hands of experts, after being used 2 years, cost about as much as first-class automobiles, on account of the cheaper material and the accessories which have been used and also because of their finish, which is generally poor.

The demand for this kind of car has declined lately, and people are beginning to realize that it is more economical to purchase a car that costs more, rather than a cheap one, which looks about as good, costs much less, but which,

in fact, is not worth half the price asked for it by the maker and dealer.

Outside of the rather small number of Mercedes and Napier cars, foreign automobiles are not of great importance upon the French market. A large number of people expect the competition of American cars will sooner or later result in bringing about lower prices of the home products.

#### LONG TRIP THROUGH MOUNTAINS

San Francisco, Cal., Feb. 24.—A trip was made recently by A. A. Moore and party from this city to Los Angeles in a four-cylinder Locomobile. The distance is 487 miles, of which 230 is over mountains. The only trouble experienced on the trip was when the shoe of a tire blew out. The tourists crossed seven mountain ranges, and as indicating the character of the country, on one day's run the gasoline gave out after 76 miles had been traveled, although under normal conditions the car would run 140 miles on its tank capacity. When the gasoline gave out, it was just getting dark, and one of the party walked until 2 o'clock in the morning, finally getting a train into Santa Barbara, where he got gasoline and returned the next day. The trip was by the coast route, and from King's City to Los Angeles the road is practically all mountainous. The mechanism of the car gave no trouble whatever on the entire trip.

Fred A. Jacobs, formerly vice-president of the National Automobile Co., has opened his new quarters at 1331 Market street, where he will handle the Rambler car.

The Stockton Automobile Co. has opened a new garage and a number of licensed automobiles will be handled. The repair department will be in charge of Gus W. Webber and the electric department will be looked after by Messrs. Toal and Snyder. The officers and directors of the company are: President, J. P. Sargent; vice-president, F. P. Adams; secretary, Harry H. Hewlett; B. W. Moore and Pliny E. Holt, directors.

#### MOTOR CAR PART WILL BE READY

Appearances indicate that few of the exhibits at the St. Louis fair will be ready on the last day of April. The N. A. A. M. will make an earnest endeavor to make the automobile exhibit an exception. On Thursday contracts for all the work will be made by Manager Miles. This will include a maple flooring for the whole space, the necessary posts and railings, overhead decorations, wall and partition covering, furniture, rugs and every item necessary to so prepare the spaces that the exhibitors will have nothing more to do than roll their cars into position. L. I. Fest, superintendent of the late Chicago show, who was appointed superintendent by the exposition authorities upon the recommendation of the N. A. A. M., will assume charge of the automobile department on Tuesday next and will be ready to receive exhibits immediately thereafter.

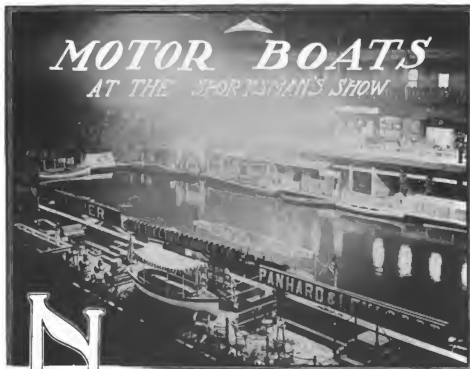
It is probable that Henry Louther, M. E., of Hartford, will be appointed a member of the international jury on awards, also upon the recommendation of the N. A. A. M.

The exhibit of N. A. A. M. members will cover 40,500 square feet and will have a frontage of 2,000 lineal feet. The cost to members, under the plan adopted, will be less than one-half and probably not over one-third that incurred at former expositions. A complete description of the equipment will be mailed to members within a week.



# MOTOR BOATS

## AT THE SPORTSMAN'S SHOW



N

EW YORK, Feb. 27.

If evidence were needed of the almost instantaneous leap of

the motor boat into public appreciation and popularity, it might be found in plenty within the walls of the Madison Square garden during the period of the annual sportsman's show. For years past this exhibition has followed certain conventional lines, being devoted almost exclusively to hunting, fishing and woodland sports with gun and rod; as such it has appealed to extensive business interests which have patronized it most liberally as exhibitors. This year the impetus of a new and unknown sport has made itself felt, with the result that the garden has surrendered to it.

The automobile boat is not only new in France, but practically unknown in this country. The type has hardly been seen on American waters; but the mere promise of what it will be within the next few months has made it the distinct feature of the year in aquatic.

In providing for the adequate setting of the motor boat exhibit the garden management has relegated all the old attractions to the background, the entire main floor being devoted to boats and motors. There are woodland de-

corations, as of old, and some very interesting exhibits of rare birds, with a few wild animals, but all of these are inconspicuous and almost unnoticed. The center of the floor is occupied by a large square tank, with water to the depth of 4 feet; around the sides of this are the stands of the leading boat builders, each conspicuous by a brilliant sign—Lozier, Speedway, F. I. A. T., Standard, Smith & Mabley, Panhard & Levassor, Electric Launch Co. At the first glance one is left in doubt whether he is at the sportsman's show or the automobile show as he reads the familiar names of the latter industry.

Within the tank float a number of boats of different types, from the modest gasoline launch of plain construction and with single-cylinder marine motor, up to the most delicate and costly constructions of mahogany, with light automobile motors. Several boats, gasoline and electric, are used for the ferrage of passengers, a cruise around the lake costing 10 cents.

At the head of the tank on the left of the main entrance is the stand of Hollander & Tangeman, of New York, agents of the F. I. A. T. motors and automobiles. The F. I. A. T. is already well known in this country, but it

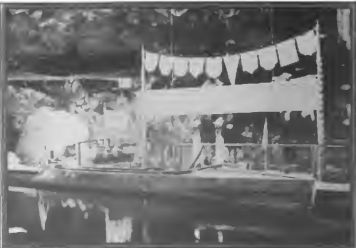
is not so well known that the same company has for several years made a specialty of speed boats and marine motors, having built a number for the Italian government and for private owners. The motors run from 16 horsepower up to 60, 150 and 300; much larger than anything yet seen on this side. Naturally they are all patterned closely on automobile practice, the smaller being identical with the motors of the F. I. A. T. cars.

One boat is shown by the Electric Launch Co., of Bayonne, N. J. She is of the extreme type, with stem raking forward, turtleback to fore deck, and a round stern above water with the regular flat over the wheel. The hull is of two thicknesses, each  $\frac{1}{4}$ -inch thick, the inner being of elm, laid diagonally, the outer of mahogany, laid fore-and-aft. There are several stringers inside, to stiffen this skin, but very few frames. One peculiarity of the model is the turning in of the sides to meet the deck, there being no angle between deck and topsides. The dimensions are: Length over all, 35 feet; breadth, 5 feet 6 inches; draft, 18 inches. The boat is shown with a F. I. A. T. motor of 24-30-horsepower, but a larger motor will replace this. The motors are, of course, imported from Italy, and the first few of the marine type are just arriving.

The Standard Motor Construction Co., formerly the United States Long Distance Automobile Co., of Jersey City, is well known from the many boat motors of the usual type now in use under the name of Standard. Last summer it entered the new field with a speed hull of extremely light construction, driven by an entirely new motor, strictly of the marine type, but on different lines from the older motors. The motor throughout was designed on the lines of a marine steam engine, with plain bedplate, and the cylinders, six in number, carried on light steel columns, with diagonal braces. With the conventional trunk piston of the explosion motor, many of the details followed closely the practice in steam design. An extra set of cams was fitted to the three forward cylinders, by which compressed air could be admitted; these cylinders running forward or backward by the power of this medium. In starting, the air is thrown on to the three cylinders, a few turns are made, and as soon as the other three take their charges of gas and the explosions begin, the air is shut off and the first three take their charges of gas. The engine may be run forward or backward by means of the air, in practice handling like a steam engine, while the admirable carburetor and throttling system of the Standard motors



THE LOZIER DISPLAY



THE ELECTRIC

give a flexibility second only to steam. This engine of 110-horsepower is shown turning by means of compressed air.

In the tank behind the Standard booth is moored a handsome mahogany launch, Dolphin II, built by the Huntington Boat Co., of New Rochelle. This boat is modeled after the Dolphin, designed by E. W. Graef, of Rudder, and so successfully tested last summer. The bow is a vertical wedge, gradually altering its form to a V amidships and then flattening out until the after body assumes the form of a wedge laid horizontally. The hull is double-skin, a very neat piece of workmanship. The decks are of planished copper. The motor is placed as far forward as possible, covered

cockpit. The hull is carvel built, with a single thickness of planking, quite light. The steering is by means of an automobile wheel at the fore end of the well, a large and comfortable arm chair being arranged for the helmsman. The motor is forward, and abaft it is a cockpit with one fixed seat carrying two leather chairs and also a separate chair. The motor is four-cylinder, four-cycle, giving a nominal horsepower of 24 at 500 revolutions. The heads are cast solid, each cylinder being a unit. The valves are at the top of the cylinder, only the exhaust being mechanically operated. The jackets are of the applied type, and the cylinders are supported on light steel stranchions. A planetary reversing gear is used,

inter-changeability of all parts, the handsome enamel, and the heavy nickel-plating. The peculiar locking of the crank by means of a nut and Woodruff key in the Eagle bicycle is duplicated in the attachment of the flywheel to the shaft in the marine motor; by means of a wrench the flywheel may be forced off easily and replaced quickly and solidly.

The Panhard motor has already won an enviable reputation on the Seine in such fast launches as Lutece and Rapée II, the latter in particular showing remarkable speed. A. Massenet & Co., who have recently established shops in New York for the repair of the Panhard cars, will also import the motors for launches. The company has a well furnished



GENERAL VIEW OF THE SPORTSMAN'S SHOW AT MADISON SQUARE GARDEN

ly two hinged sections of the deck, which may be raised to give access to it. The helmsman is seated on a fixed thwart just abaft the motor, with an automobile wheel in front of him and all the levers of the motor within easy reach, even the starting being done without leaving his seat. Abaft him is a shoal cockpit, at the level of the waterline, with no chairs, only rugs and low seats. The power is one of the new Standard automobile motors—by the way, an introduction of marine practice into car work.

The Speedway boats have their berth at the great plant of the Gas Engine & Power Co. and Charles L. Seabury & Co., at Morris Heights, on the Harlem river. On the opposite side of the river runs the famous speed way, loved by all New York horsemen, and the measured miles on this road, marked by posts visible from the river, give an excellent testing course for the boats. The combine companies are veterans in boat construction, but even they have recognized the demand by a radical addition to their list of pleasure craft. During the past season both Mr. Seabury and Mr. Howard have been at work on new models of motors, at the same time being occupied with the development and practical construction of a new automobile. The principal feature of the exhibit is the launch Queen, a mahogany boat of 33 feet 6 inches length and 4 feet 10 inches breadth. The model shows a raking stem and a curved stern of the torpedo type—the forward deck is of mahogany, turtle-backed, and there is a long

the speed astern being three-fourths of the speed ahead.

The great attraction of the Smith & Mahley exhibit, located at the foot of the tank, is, of course, the launch Vingt-et-un, for which a speed of nearly 25 miles an hour is claimed. So much has been printed about this boat that all are eager to see her. A handsome mahogany model of a 30-mile launch is shown, also the design of the \$2,000 cup for the match between this company and the F. I. A. T. The Vingt-et-un lies afloat, with engine running and propeller turning, and at times is taken out on the tank, though, of course, very carefully run. The hull is of mahogany, ship-lapped, built by Thomas Fearon, of Yonkers. The motor is placed forward, the helmsman sits just abaft it with steering wheel, starting crank and control levers close under his hands, while there is a cockpit aft for five or six persons. The motor is the new Simplicity, built for both car and boat work. The firm will soon have out the first of its special marine type, of four-cylinder, 75-horsepower.

The name Eagle, once well known to cyclists, is winning new fame among the owners of the smaller classes of launches, the marine motor made by the Eagle Bicycle Co., of Torrington, Conn., being noted for some of the special details and the same grade of workmanship which made the bicycle famous. The Eagle is a single-cylinder, two-cycle motor, built in sizes of 2, 4½ and 6-horsepower, for open launches and power tenders. The relationship to the bicycle is shown in the complete

space, and beside it in the tank is a handsome speed boat, built by the Electric Launch Co. and similar in form and construction to the F. I. A. T. The dimensions are: Length, 31 feet; breadth, 4 feet 6 inches; draft, 8 inches. The motor is the 1904 Panhard, fitted for either car or boat, with the Krebs carburetor. The exhaust passes upward to a horizontal muffler carried over the motor, an ornamental casing and oval stack giving a finish to the launch and carrying off the exhaust.

The work of the Electric Launch Co., of Bayonne, in the line of the more costly automobile boat has already been described. At the company's stand is shown one of the stock boats, the 21-footer, fitted with Eagle motor, which has proved very popular within the past year. In the tank is shown a 25-footer, Electra, with a small launch, the Buster Brown, the latter carrying passengers and being the special choice of the small chaps.

The Lozier Motor Co. shows this year a new model of all-around pleasure launch, built in two sizes, 21 and 25 feet. This has a raking stem and torpedo stern, the white topsides are set off by mahogany wales, plankbeams and brass railings. The motor is placed aft, giving the cockpit up to the passengers. One of these boats, the Water Boy, is running about the tank. On the floor are shown the familiar two-cycle motors in various sizes, the new four-cycle 20-horsepower marine motor, and the "auto-marine," a high-speed motor of the car type, four-cylinder, each 4½ by 5½ inches, with mechanically operated valves, governor and



THE STANDARD EXHIBIT



MOTOR AGE

MOTORS SHOWN BY F. A. LA ROCHE

the general construction of a car motor, but fitted with different bases for car or launch.

The C. H. Blomstrom Motor Co., of Detroit, Mich., is a new-comer in New York, but it is well represented by its exhibit of launches and motors. One of the company's specialties is an open 15-foot launch, fitted with 11½-horsepower motor, designed to sell at a low price.

The Western Launch & Engine Works, of Mishawaka, Ind., represented by Newbury & Dunham, shows its regular type of open pleasure launch, fitted with the Western motor, and at the same stand is shown the White four-cylinder motor and the launches of the Pearson Boat Construction Co., of Duluth, Minn.; one of the latter being afloat in the tank.

The Pierce boats and motors are shown at a handsome stand under the management of the New York representative, the Siegel-Cooper Co., one launch being afloat in the tank.

The Spaulding Gas Engine Works, of St. Joseph, Mich., shows its motors of both two-cycle and four-cycle type, of the usual pattern with cast base and crank case. The cylinders and heads are cast solid and special provision is made for lubrication. The wrist-pin is lubricated by a sight-feed oiler attached to the top of the cylinder, a passage being drilled in the cylinder walls by which the oil is led down and into the cylinder, where it passes into the side of the piston and the wrist-pin bearing on every stroke. At the other end of the con-

necting rod is cast a small pocket with an oil-hole to the crank bearing. Oil is led by a pipe into the side of the crank-case in such a way as to fall into the pocket in the connecting rod, thus being conveyed directly to the shaft, without depending on the splashing.

The Buffalo Gasoline Motor Co., of Buffalo, N. Y., shows a full line of its well-known high-speed motors in all the smaller sizes. This motor has been further improved in minor details this year, retaining all the standard features. The four-cylinder 20-horsepower is a very convenient size for the medium class of launches, both open and cabin. The cylinders are 5 by 6 inches, the flywheel is but 22 inches in diameter, and the weight, with reversing gear, is 1,425 pounds.

The Lackawanna Motor Co., of Buffalo, N. Y., shows a neatly designed motor that is new to New York. The crank-case is in the form of a box casting with separate ends, fitted and bolted fast, the main bearings being in the center of each end. The arrangement is such that all parts may be faced and bored in a lathe with a certainty of accurate fit and alignment. The cylinders are cast with solid heads; one, two or three in a single casting, so proportioned to admit of very accurate machine work with no danger of undue expansion at any point.

That fighting four-cycle motor, the Strelinger, made by the Charles A. Strelinger Co., of Detroit,

Mich., is shown in the 3 and 10-horsepower sizes, a very plain, simple and cleanly designed motor with all parts ground to fit.

In the way of a kerosene motor the Miets & Weiss motor, of New York, well known in the past in stationary work, is shown in marine form, with special base, reversing gear, etc. This motor will interest the many who have serious objections to gasoline as a shipmate.

Heretofore the Truscott Boat Mfg. Co. has been a conspicuous exhibitor at these shows, but this year the company makes a modest yet interesting exhibit of engines and boat molds. The engines include a four-cylinder four-cycle, embracing the good features of both the automobile and marine motor, inasmuch as, for the hard work it has to do as a marine motor, it is made somewhat heavier than the ordinary automobile motor but much lighter than marine motors are usually made. It is rated at 50-horsepower and will see service in South America. The valves are on the starboard side and easily reached by means of disconnecting an ordinary union. The intake pipe is through a heater, through which the exhaust passes. This not only heats the inflowing gas but reduces the number of pipes and thereby gives the motor a neat appearance.

The Isham Co., the Cushman, and several others exhibiting at the Herald Square exhibition hall last week have transferred small parts of their exhibits to the garden.



THE PANHARD &amp; LEVASSOR BOAT

MOTOR AGE

THE ELECTRIC LAUNCH CO.'S DISPLAY

# MOTORIZING NEWS FROM EUROPE

## SEVERE ON GERMAN MOTORISTS

A serious clash has occurred between the city administration of Frankfurt-on-the-Main, Germany, and the automobile club, automobile dealers and owners of the city. The city council considers that a touring car is a luxury and deserving of an extra tax. Therefore a proposition was introduced to assess all automobiles, which are not for commercial use, 200 marks, or \$50, per year. There are only seventy-seven automobiles in Frankfurt which could come under the taxation regulation.

If Frankfurt automobilists are rightly up in arms, and all through Germany there is now something like an uprising. The police, local authorities and courts have become exceedingly severe and show a disposition to make it as unpleasant as possible for offenders.

The situation has become so alarming that the trade papers, and the few dailies which side with the motorists, have taken up the matter, not only in publishing short notes but in running columns of editorials and suggesting that the automobile clubs through the empire use their influence to remedy the situation. In several instances the trade papers criticize the clubs, saying they occupy themselves too much with good times rather than with work.

What the outcome will be cannot be foretold, but it is likely that the manufacturers will find it necessary to address a petition to the government, as the present condition of affairs is beginning to react upon the trade in general.

## CHARLEY VERSUS LAMBERJACK

M. Charley, the Mercedes agent, returned to Paris February 19 and was almost mobbed by the representatives of trade and daily papers who wanted to know all about W. K. Vanderbilt's record. Only a few hours before Lamberjack had written his impressions about Florida and in a sarcastic vein gave the impression that every alleged record established on the Ormond course was not correct. M. Charley not only repudiated these statements, but stated that instead of being astonished at the fast times made on the Ormond course, one should be prepared to hear about still more remarkable performances. "It is the ideal racing course for great speed, not to be found elsewhere. Imagine a straight line, 50 kilometers long, as flat and even as a ruler, hard as a billiard table, upon which neither vehicle nor horse whose traces can be found after they have gone over it. Of course the times made are astounding, especially with the 60-horsepower Mercedes, but don't forget that these are new machines and not last year's cars. I believe that the Ormond race course is at least 10 per cent faster than the Donnan road, for while we could not use more than twenty-nine teeth on the small pinion on the Donnan road, it was an easy matter to use thirty-two teeth in Florida. This is a strong argument in favor of the American speedway."

## ITALIAN MOTOR CYCLE EVENT

The motor cycle road race, from Milan to Nice and back, arranged by the Gazzetta dello Sport, of Milan, had to be stopped at Nice, owing to the inclement weather. Sixty of the eighty-seven riders who entered, started, and motor cycles made by almost every important

European manufacturer, were represented, while among the contestants were many well known continental drivers. The run from Milan to Nice was made in four stages, and forty-four of the starters reached the French city within the time limit. On the third day, a 500-meter hill-climbing contest took place at Oneglia. Only 32 yards were allowed for the start. Tamagni, on a Marchand, was first, covering the distance in :59½. Brambilla, on a Turckheimer, was second in 1:02½, and Cerizza, on a Stuechi, secured this place in 1:02½.

The Peugeot, Zedel and Turckheimer motor cycles were awarded the three special prizes, while gold medals were given to the Adler, Allright, Dei, Motoconco, Stuechi and Wanderer machines.

## LICENSING FRENCH OPERATORS

The conclusions of the French parliamentary commission, concerning the changes that are to be made by the service des mines in the issuance of automobile operating permits are interesting.

The commission urges more severity in the examinations and more care when candidates are being examined; that no certificates be



ON THE MILAN-NICE ROUTE

issued to anyone under 18 years; that candidates undergo an examination of the eyes. When a "certificate of capacity" has been granted after a first examination, it is suggested that it ought to apply for automobiles of a limited power, while after a second examination, the certificate could be changed to cover automobiles of any power. Speeding cars, such as racing machines, ought to be driven by those specially authorized to handle these particular cars. It is also suggested that motor cycle drivers may be exempted.

## HAS MANY PROMINENT MEMBERS

The yachting committee of the Automobile Club of France comprises forty-nine members. The honorary president is Vice-Admiral Boule, the president is Henri Menier, and the three vice-presidents are Marquis d'Alton, Comte de Jevoy and Camille Blanc. Among the members are such well known automobile manufacturers as C. Clement, E. Delahaye, G. Gobron, E. Moers, A. Peugeot, L. Renault, F. M. Richard, L. Serpillet and E. Voigt. Among other members are Rene de Knyff, G. Rives, G. Prade, H. Desgranges, Marquis de Chassecloup-Loubat, Prince d'Arenberg, Baron de Zuylen.

## CUP RACE DEVELOPMENTS

The matter of securing a course for the British eliminating trials for the Gordon Bennett cup race is now being discussed and the suggestion has been made that the trials be made on the Isle of Man. Lord Raglan, the lieutenant governor, has been approached and, it is thought, views the proposition favorably. So far as the highway boards of the island are concerned, no obstacle will be placed in the way of the trials being decided upon the roads under their jurisdiction. Many of the roads are fairly wide and generally their surface is good. In many places they are hilly, but there are plenty of level stretches and a good 60-mile course will easily be available. Secretary J. W. Orle, of the Automobile Club of Great Britain and Ireland, suggests that Douglas would be a good starting place. The trials will take place in May. Fourteen cars have been entered, which is ten more than were entered last year.

Although part of the Taunus is covered with 2 feet of snow, many prospective drivers in the international race are getting familiar with it and at the same time test their new cars. Jenatry is reported to have gone over the course over a dozen times within a month, while Baron de Caters, Augieres, Barberous, de Knyff, Hautvast, Jarrott and Baron de Crawhez have made frequent trips to Germany to become well acquainted with the dangerous road. "It will be a brake test, more than anything else," said a French driver, "because there are so many places where the brakes will positively have to be applied unless one wishes to run the chances of accidents."

According to a Paris paper, the German government recently required that the course of the Taunus road be somewhat changed between Oberursel and Homburg, owing to the dangerous nature of this section. It was decided that the road pass through the village of Gluckensteinweg and Dorshilshausen.

Theodor Dreher of Vienna, has taken an option on one of the three Austrian Danubian racing cars which are to take part in the race. Several options not reported to have been received by enthusiastic German and French automobilists on racing cars which will compete in the trial races.

## GERMANY'S FIRST RACES

The first motor boat races, to be run in Germany, will take place June 25, during the week of the Kiel regatta. The motor boat events are arranged by the Automobile Club of Germany and entries for the races should be sent to the secretary of the club at Berlin up to June 1. The craft will be divided into eight classes: Motor boats measuring from 75 to 95 feet, with unlimited power; boats from 47 to 70 feet, with unlimited power; boats from 47 to 70 feet, with a maximum of 100-horsepower; boats from 31 to 47 feet, with unlimited power; boats from 31 to 47 feet, with a maximum of 50-horsepower; boats from 25 to 31 feet, with a maximum of 30-horsepower; boats 25 feet or less, with 16-horsepower, and boats 25 feet or less, with a maximum of 6-horsepower.

The boats of the first three classes will cover a course about 3½ miles long; those belonging to the two following classes will cover one about 2½ miles long.



# THE READERS' CLEARING HOUSE

## CALCULATING SPEED RATIOS

Milwaukee, Wis.—Editor **MOTOR AGE**—Will you kindly explain the method of determining the ratio of speed between the motor and the driving wheels of an automobile to obtain a certain road speed in miles per hour when the speed of the motor is known?—F. G.

First determine the number of revolutions of the road wheel necessary to make the given number of miles in an hour. Reduce this to the terms of minutes by dividing by sixty. The ratio of this number to the number of revolutions of the motor shaft would hence be the speed ratio of transmission and capable of reduction to any desired terms. For a simple example take a machine with a single reduction of speed, driving straight from motor shaft to rear wheels. Suppose its motor runs at 900 revolutions normally, its road wheels are 30 inches in diameter and it is desired to gear it to 30 miles an hour. Thirty miles an hour equals 1,900,800 inches or 31,680 inches a minute. The circumference of a 30-inch wheel is 94.24 inches. Hence 336 revolutions a minute would be required to accomplish the required speed. The speed ratio of transmission would then be 900 to 336; or, reduced to simpler terms, two and seven-tenths to one. If the motor shaft sprocket were of ten teeth the road wheel sprocket would be of twenty-seven teeth. Such calculation does not of course include allowance for slippage or other lost motion.

## MOTOR DISPOSITION

Deatur, Mich.—Editor **MOTOR AGE**—Granted that the shock from the explosion in a gasoline motor is equally expended upon the cylinder head and upon the piston, would it make any difference in the running of an automobile whether the cylinder of a horizontal motor were extended toward the front or toward the rear of the machine? What objection is there to applying the make and break form of ignition, which is used successfully on stationary motors, to automobile motors?—A. E. LAWRENCE.

It is probably the better practice to place the single-cylinder horizontal motor with the cylinder head to the front, for when it is in this position the head is substantially in the middle of the frame and the recoil, to cause vibration, must exert itself against the entire frame and its load. If on the other hand the cylinder head is toward the rear and well back toward the rear axle the recoil may easily cause a vibration which owing to the springs may be repeated at the front end of the car. The make and break form of ignition has been applied successfully to automobiles and is now in use on several high-class machines. Its use seems to be growing.

## THREE-CYLINDER MOTOR

Akron, O.—Editor **MOTOR AGE**—What bore and stroke would be required in a three-cylinder motor to develop 12 horsepower at 900 revolutions per minute? What should be the compression space? How should the valves be

set so that there would be an impulse every two-thirds of a revolution?—O. J. K.

To develop 12 horsepower the bore and stroke of each cylinder should be 3½ and 4½ inches respectively. There are of course other proportions of cylinder bore and stroke to furnish the same power. The compression space in terms of cylinder diameter and length should be about one-fourth the bore, or, in the above case 1 1/16 to 1 1/4 inches. To give an impulse every two-thirds of a revolution apart with the cranks set at 120 degrees the valve gearing would be set so that the cycles of the three cylinders would follow one another in rotation. Thus the order of the phases in three cylinders A, B and C would be for two revolutions:

A	B	C
Impulse	Compression	Intake
Exhaust	Impulse	Compression
Intake	Exhaust	Impulse
Compression	Intake	Exhaust

## DISPLAYS AT SHOWS

Athens, O.—Editor **MOTOR AGE**—I am much interested in automobile shows and think them to constitute excellent means for promoting the sale of automobiles. I believe that it would be to the interest of manufacturers exhibiting at shows to display the mechanical features of their cars more fully. It would be well to follow the practice of the French manufacturers at their shows in the exhibition of running gears without bodies, and to also show complete motors and transmission gears driven by external means and with the upper half of each removed to make plain the operation of the valves, gearing, etc.—B. D. HEMPSTED.

This custom is growing rapidly in this country and this year at each of the large national shows the majority of the exhibitors had chassis without bodies, while several had sectional motors running to show the operation. Such exhibits are bound to increase in number each year.

## HORSEPOWER FORMULAS

Topeka, Kan.—Editor **MOTOR AGE**—I would appreciate the publication of formulas for the determining of motor horsepower.—H. HONSON.

This matter has been treated several times in **MOTOR AGE**. The correspondent and others interested in it are referred to the issues of February 4 and 18 of this year and of May 28 of last year. In the article in the latter issue a typographical mistake should be noted, it being the statement that calculations used as examples in the article were based on a mean effective pressure of 33 pounds. This should have read 66 pounds.

## INCREASING COMPRESSION

Winnipeg, Canada—Editor **MOTOR AGE**—The motor of my car is of 4½ by 5½-inch bore and stroke. The compression pressure is a trifle more than 40 pounds. I wish to increase it.

EDITOR'S NOTE—**MOTOR AGE** has on file many letters from readers to this department. These will be printed as rapidly as space permits.

The compression space is 4 inches in diameter, the piston reaching almost to the commencement of this reduced diameter on its inward stroke. I tried to increase the compression by putting a plate of cast iron on the head of the piston; but only succeeded in obtaining premature ignition. I suppose the piece of iron on the piston became red hot and fired the charge.—A. LOIN.

The cast iron piston would not become hot enough to fire the charge. Other conditions being normal it is probable that the iron plate attached to the top of the piston was too thick, caused by too great an increase in the pressure and hence premature firing. On account of the compression space being of less diameter than the cylinder its volume would be decreased at a greater rate by the reduction of length. A thinner plate might be tried and the better plan would be to make this of aluminum to prevent increasing the piston weight materially. Before changing the compression space in this manner it might be well to see that there is no leakage past the piston rings. There may be enough compression if there is no loss.

## MOTOR BICYCLE TRANSMISSION

Winchester, Mass.—Editor **MOTOR AGE**—I am building a small air-cooled motor for a motor bicycle. It is of 2½-inch bore and 3-inch stroke. What horsepower should it develop at 1,500 revolutions per minute? What should be the diameter of the rear pulley to give a speed of 20 miles per hour, if the motor pulley is 3 inches in diameter and the bicycle wheels are 28 inches in diameter? Of what metal should the rear pulley be made?—A. W. HAWES.

The motor should develop from 1½ to 2 horsepower. To give a road speed of 20 miles an hour with the engine running at 1,500 revolutions the rear pulley should be 18½ inches in diameter. It would be well to make it a little, say an inch, under this so that the desired speed could be obtained without forcing the engine to its highest speed except under difficult conditions; also to allow for a slight loss in belt slippage. The rear pulley should be made of steel.

## PREVENTING FREEZING

Chicago—Editor **MOTOR AGE**—How can I keep the water in the water circulating system of my car from freezing during short trips on which the motor is not stopped, and without using an anti-freezing solution?—PAXTON RUDD.

It is, of course, always safest to use an anti-freezing solution during cold weather, but for trips on which the motor will be kept constantly running, one may insure against freezing of the water by putting several thicknesses of heavy cardboard or heavy, closely woven cloth, such as flannel, over the front of the radiator, to prevent the passage through it of the draft of air.

## UPHOLSTERING MATERIAL

Cleveland, O.—Editor **MOTOR AGE**—Is patent leather good material with which to upholster an automobile? I have a retrimming job on hand which calls for a glossy black leather.—A. B. H.

Patent leather makes an excellent appearing job, but like on shoes it is liable to crack without notice. A good enamel leather is more durable and to all intents and purposes looks just as well.



# AUTOMOBILE

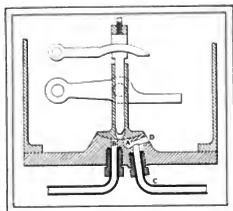
## HILL OILER

The question of lubrication is one of the most interesting of all automobile topics and has been the cause of the introduction of numerous devices and means for rendering lubrication both automatic and reliable. One of the most recently introduced lubricators is the Hill Precision oiler, manufactured by the Steel Ball Co. of Chicago. This oiler was first shown at the Chicago automobile exhibition a few weeks ago where it attracted no little attention. It is claimed by the makers that this oiler will uniformly feed exact quantities of oil to each bearing, regardless of the resistance, or of the varying resistance, in the different delivery tubes; that it will feed only when the machinery is in motion; that it will not leak oil, whether the machinery is in motion or is standing still; that it will, if desired, feed cylinder oil to the cylinders and common machine oil to all the other bearings, at the same time; that it has no valves or stuffing boxes, yet it will send oil to any required height or distance; that its separate feeds are independently adjustable, and when once set will only vary their respective rates of supply with the varying speed of the motor and that it cannot be thrown out of adjustment.

The sectional diagram indicates the construction of the oil measuring and delivery mechanism. It consists essentially of a rocker bar, hung at its ends by trunnions, working in bearings near the middle of links hung at one end and free at the other. These links serve to hold the lower cylindrical edge of the rocker against its seat. The bar is provided with the desired number of plungers, fitted to slide in corresponding holes. By the rocking movement of the bar the plungers are caused to register alternately with the intake port A and the delivery port B. When in register with the port A the plungers are lifted by cams, each draws in its fixed charge of oil, retaining it until in register with the delivery port B. When this point is reached the cams release the plungers, and these drive the oil into the corresponding delivery tubes, on its way to the bearings.

The apparatus is so constructed that it may feed more than one kind of oil at the same time, if desired. This is especially valuable in the case of internal combustion engines, since an oil suitable for the general bearings is not suitable for the cylinders, and vice versa. To feed as many different kinds of oil as desired it is only necessary to provide separate oil holders, to connect them by pipes, as shown at C, and to plug the corresponding openings D, inside the main oil tank.

The Steel Ball Co. is also preparing to intro-



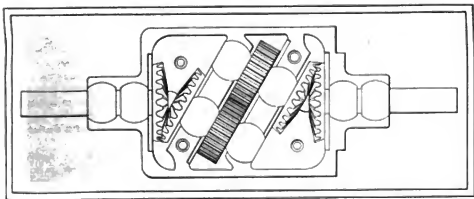
SECTION A-B THE HILL LUBRICATOR

duce complete rear axle sets, the distinctive feature of which will be the differential gearing, which is of rather unconventional construction. The gear comprises two pairs of bevel pinions and two spur gears, all of which are mounted on spherical bearings. The bearings include what are termed emergency bearings within the gear, to take the strain in case the main or outer bearing binds. The whole gear is small, light and obviously of few parts. In the rear axle structure the brake shoes, drums and operating mechanism of the brake system will be enclosed in a smooth, spherical steel case containing also the equalizing gear and the sprocket or bevel pinion for the final drive. In using the axle in the manufacture of an automobile it will be necessary only to connect a projecting eye bolt by rod or wire to the brake lever in order to complete the braking apparatus.

By taking out a section of the spherical case, made for the purpose, ready access is had to the mechanism.

## RUCKERT STORAGE BATTERY

G. Rudolph Ruckert, 13 East Thirty-ninth street, New York, makes a specialty of storage batteries intended for ignition purposes. The battery is said to be small for its capacity, to give a vigorous spark when used in connection with any good induction coil, to furnish a constant current and to show no appreciable loss by deterioration while not in use. It is made in several sizes, all with the same construction. The plates in each cell of the 4-volt battery are 5 by 6 inches. The body consists of a sheet of pure lead which is ribbed and punched and filled with "active" material under heavy pressure. The plates are set in hard rubber jars and the top or cover is sealed in place to prevent a jarring out of the liquid. The sealed cells are boxed in a polished oak case with lacquered brass binding posts for the terminals.



SECTION A-B THE HILL DIFFERENTIAL GEAR

# DEVELOPMENT

## LENS MIRRORS

About 8 years ago the Rushmore Dynamo Works, of Plainfield, N. J., had developed the manufacture of the lens mirror for searchlights to such an extent that it became satisfied that it would be wise to abandon the metal reflector entirely. Since that time in the manufacture of marine searchlights it used nothing but the lens mirror. For over 2 years the company has been making lens mirror locomotive headlights and these have been adopted by many railways. Three years ago the company introduced the lens mirror searchlight for automobiles. The rapid growth and popularity of this form of automobile headlight is known to all. The Rushmore company, as pioneer in the construction of such searchlights, has naturally given the subject much consideration. Its own explanation of the advantages of the lens mirror is as follows:

"Fig. 1 shows a common spherical mirror having the glass the same thickness all over; A, B and C represent parallel rays of light entering the mirror, as when it is turned to the sun. The ray A enters the glass near the rim at quite a sharp angle, is refracted, or bent upward and striking the silver backing is reflected back at the same angle as it struck the silver, and passing out of the glass is bent downward and strikes the axial line of mirror at the point D.

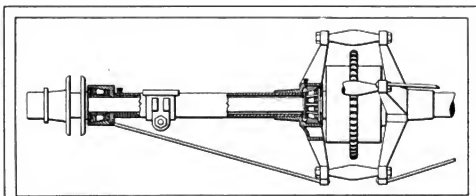
"As the ray A enters the glass it is not refracted at the same angle as that at which it struck the glass, but as the sine of the angle, which is very much greater and thus it strikes the axial line at a point very much nearer the lens than do the lines B and E, which strike the glass at much wider angles, and thus it will be seen that a common hollow mirror has no true focal point and a gas flame or other light will not give a parallel beam, but only a lot of scattering rays. This scattering effect is known as spherical aberration and it is overcome in the lens mirror, as shown in Fig. 2.

"Here it is seen that the front curve of the lens is much deeper than the rear curve, so that the glass is very thin at the centre and thick at the edge and that the front and back surfaces are at always changing angles to each other. The ray of light A is here seen to enter the front surface, where it is bent upward and strikes the silvered rear surface at a much less angle than in Fig. 1 and returns to the front surface at nearly the same angle as that at which it entered the glass and is again refracted and strikes the axial line at the point D. The rays B and C in passing through the glass are likewise refracted and reflected and each arrive at the same point D as the ray A and thus such a mirror when held to the sun makes the most powerful burning glass that can be produced.

"It will readily be seen that when a light is placed at the point D in Fig. 2 the rays that strike the mirror will all be projected in a parallel beam with little or no scattering. In the case of the 8-inch Rushmore lens mirror, the flame is placed at the focal point, which is just 4 inches from the center of the lens, and as the lens is about 2 inches deep at the center, it will be seen that the flame is actually but 2 inches from the front line of the mirror and to all intents and purposes the mirror is of but 2-inch focus.

"A simple refracting lens 8 inches in diam-





THE TIMKEN ROLLER BEARING LIVE REAR AXLE

eter could not well be made over 1 inch thick at the center and it would then have a focus of at least 12 inches, that is to say, the light would have to be placed a foot away to get any beam at all, just six times as far away as with the lens mirror of the same diameter, and catching almost none of the light of the flame and making a lamp that looks more like a gun than anything else.

"The lenses are made of the best optical glass, annealed in the best manner and are unaffected by the flame, the heat of which is much less than that of the arc light used in the electric searchlights. The silver backing on the lens is chemically formed in a layer so thin that if held to the light one may see through it and it gives the glass a deep blue color, though if looked at with the light from the rear it appears as a common mirror.

"As soon as the thin film of silver has formed, the lens is immediately placed in an electro-plating bath and given a thin coating of pure platinum. As silver expands with heat at a very different rate from glass it would instantly peel off if of appreciable thickness with the slightest change in temperature, and thus common methods of silvering cannot be used with success. Platinum has exactly the same ratio of expansion as glass and thus holds the fine coating of silver in place. This bi-metallic coating is one of the secrets of the success of our lens mirror and is subject to patents now pending. The platinum coating adds greatly to the cost but the results fully justify the outlay."

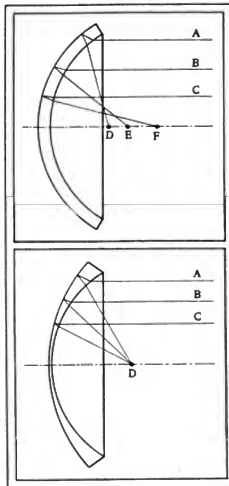
### TIMKEN ROLLER BEARINGS

Anti-friction bearings have become almost universal on automobiles. Roller bearings were made common by the automobile. The bearing made by the Timken Roller Bearing Axle Co., of Canton, O., has for its most important feature the conical or tapered rollers and cones. The action, owing to this taper, under all conditions and strains is claimed to be a rolling motion. End thrust is also taken care of by the conical or tapered rollers.

Each cone has two ribs that engage the grooves in the rollers. These ribs prevent the rollers from twisting or turning crosswise on the cones, retaining them in their proper positions and making possible the use of solid rollers. The end thrust is sustained by the grooved ends or surfaces of the rollers pressing against the ribs on the cones, and as they revolve on the ribs and do not slide, the end thrust friction is reduced.

Wear in tapered rollers can be taken up by forcing the cone with its set of rollers further into the box or raceway, thus insuring a snug fit and long life to the bearings. The adjust-

LENS MIRROR—FIG. 1, SHOWING THE EFFECT OF A COMMON SPHERICAL MIRROR



LENS MIRROR—FIG. 2, SHOWING THE EFFECT OF A LENS MIRROR

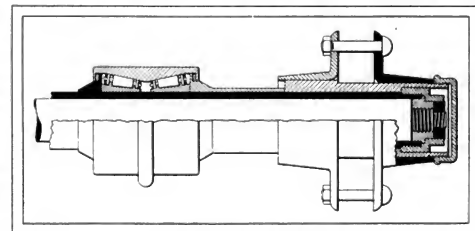
ment in the Timken bearings is positive. The adjustment cannot very well be made too tight, because the axle nut jams against the shoulder of the spindle. If at any time the bearing wears so that the adjustment is loose, a thin steel washer is inserted in the recessed face of the axle nut, thereby advancing the cone and taking up the wear. All bearings are made of machinery steel, case-hardened and ground. A dust-proof device is used to retain oil and exclude foreign matter.

The box of the hub is machined from the solid bar, case-hardened and ground. The flanges are made of stamped steel, the rear one being brazed to the box. The stamped steel artillery hub is lighter and neater than a malleable or cast iron hub, and it is shorter over all. Brass hub caps are furnished on all hubs, and the steering knuckle bolts are made extra strong and work in heavy bronze bushings. A cotter pin is inserted in the bolt underneath the nut. The steering knuckles are furnished either with square or round stubs, and also with solid or tubular axle part to the track desired.

Divided and solid rear live axles are furnished. The divided axle is trussed front and bottom and is constructed to stand the rough usage and hard wear to which the rear axles of automobiles are subject. There are tapered roller bearings at four points. Key-seated artillery hubs are regularly fitted, with brakes when specified.

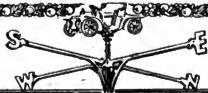
The solid rear live axle is made of cold drawn axle steel extending unbroken from wheel to wheel. The tubing engaging one side of the compensating gear is made of cold drawn seamless tubing. A bearing is placed under each spring. The box or cup is machined out of the solid bar, and grooved on the outside, having the spring seat casting and reach or body bar lug immovably clipped about it. The collar against which the inner cone impinges is brazed on the shaft of the tubing, the outer collar being loose with a loose sleeve intervening between it and the hub. As the nut forces the hub inward, the hub forces the sleeve inward against the loose collar and thus makes the adjustment.

Both styles of rear axles are made to any track desired. In special cases only the cone, bearings, collars with spring seat attached are furnished. They can be made in various sizes for rear divided axles, bevel gear drive axles, intermission shaft and special artillery hubs. For bevel gear drive axle, these bearings are desirable because of their tapered construction, the side thrust of the gear being taken care of as well as the cut weight.



ONE END OF THE TIMKEN ROLLER BEARING STATIONARY REAR AXLE

# FROM THE



# FOUR WINDS

Arthur Wright, of Stockton, Cal., will handle the Rambler exclusively this year.

Frank P. Prinel, former publisher of the Wheel, is to start a new automobile and power boat paper with John J. Prinel as business manager.

An order has been received by the E. R. Thomas Motor Co. to build a special Thomasine for a member of one of the royal families who will visit the world's fair at St. Louis next May.

The engineering students of McGill university, Montreal, Canada, are constructing a gasoline automobile. The motor is 12-horsepower, and the car will be upholstered in scarlet and white, the colors of the university.

As automobile and motor cycle show will be held in Pittsburgh hall, Rochester, N. Y., from March 20 to 26. The automobiles will occupy the main floor, while the galleries will be devoted to motor cycles and bicycles.

Cissac, a French motor cyclist, recently broke the world's indoor mile record, covering the distance in 57 seconds; he also covered 5,000 meters—over 3 miles—in 3:01½. The records were made on an 18-horsepower machine.

At the last Berlin automobile show there were eighty-six exhibitors, which was then record for Germany. Up to February 14, a month before the opening of the Frankfort show, 140 applications for space had been received.

The Tippencanoe County Agricultural Association will make automobile races a feature of its fair at Lafayette, Ind., this year. The automobile races will be held on Tuesday, as the track will then be in good condition.

A number of German papers are greatly worried over the announcement that Madam du Gast is to compete in the German eliminating trials, not because they would rather see a German woman in her place, but for the fact that if an accident should befall her people would be wrought up and would claim the organizers had no business to allow a woman in the race.

The Utah Automobile Co., of Salt Lake City, Utah, is building a two-story garage, 45 by 100 feet, on Market street. The building will be of pressed brick and cut stone and will be completed about April 1. It will cost \$7,000. L. C. Snow is president and manager of the company, and W. L. Pickard, Jr., is secretary and treasurer. Salt Lake now has about forty motor cars.

A Paris paper says that the latest fad of wealthy Americans, after landing at Illave or Cerebourg, is to continue the trip to Paris in automobiles. The latest instance was that of C. M. Schwab and Mr. and Mrs. Kessler. Henry Fournier was on hand with a 60 horsepower Mercedes car and took the Kesslers, while Charron, driving Schwab's eight-cylinder C. G. V., took him to Paris.

Baron de Caters, the Belgian operator, was elected alderman in the village where he resides.

The motorists of Indianapolis, Ind., are already preparing for an automobile race meet in that city Decoration day. Carl Fisher is the prime mover in organizing the meet.

The first Japanese automobile transportation company has been organized at Nagasaki. The capital of the company is \$17,500 and the distance of the road which the omnibuses have to cover is about 5 miles.

At a meeting of the automobile dealers of Minneapolis, Minn., last week the following officers of the Automobile Dealers' Association were elected: President, A. W. Strong; vice-president, H. E. Pence; secretary, W. T. Walker; treasurer, L. H. Fawkes.

The Fort Wayne, Ind., automobile club will petition the city council to have the ordinance regulating the driving of automobiles over the street changed so that tail lights will not be required. The club has no objections to other parts of the ordinance governing automobiles.

At the recent show in Turin, Italy, there were on exhibition sixty-six automobiles, three motor boats, 110 motor cycles and 125 bicycles. The value of the exhibit was placed at about \$300,000. About a hundred motor cars and 200 motor cycles were sold, according to report.

The membership of the German Motor Cycle Rider's Association has grown from fewer than 100 members, June 15, 1903, to 1,650 on the first day of this year. The Automobile Club of Frankfort, which had 118 members at the end of 1902, gained ninety-six members during 1903.

The Woodruff Automobile Co., of Akron, O., has submitted a proposition to the board of trade of Ashland, O., for the removal of its factory to that place. It manufactures a light gasoline automobile and is desirous of securing larger facilities and increased capital. It is proposed to organize a new company with \$100,000 capital stock.

Another weekly trade paper will enter the field of automobile journalism early in April. Its title will be Motoring and Boating. It will be published in New York. J. P. Holland will be its editor, and Leo Straus, of the American Darracq Automobile Co., now prominent in the promotion of the Virginia Beach race meet, its business manager.

The Automobile Club of Great Britain is endeavoring to eliminate all traces of commercialism and will have no business deals around the club. The action of the club in giving its "patronage" to one of the shows is severely condemned by the majority of the members, one being quoted as saying, "When the club begins to offer its 'patronage' for \$2,500 it is time for gentlemen to get out."

The Day Automobile Co., of Kansas City, Mo., has sold its business to The Automobile Co., and the management of the former will retire from business.

The Tennant Auto-Tire Co. has opened an eastern office at 1900 Broadway, at the corner of Sixty-third street, New York, and has appointed Cornell & Phillips as representatives. A full line of tires will be carried at this office.

Coldwater, Mich., is making the assertion that it is the hottest automobile town on the pike. It has a population of about 7,000 and growing—and there are twenty-four automobiles owned there at the present time. In this assortment there are ten Ramblers, nine Olds, two Wintons, one Knox, one Locomobile and one Cadillac.

An adjustable brazing forge which is fitted with extra powerful double jet burners mounted on a compound swivel in such a manner as to enable the operator to place the burners in any position, is manufactured by the Turner Brass Works, 59 Michigan street, Chicago. It is claimed that the Turner double jet burners generate a temperature of over 3,000 degrees Fahrenheit.

A garage has been opened in Kalamazoo, Mich., by M. E. and C. C. Blood, who have until recently been connected with the Michigan Automobile Co. They will handle the Cadillac, Toledo and the Pope lines. The garage will be known as the Kalamazoo Automobile Agency. A stock company is also being organized to be called the Blood Bros.' Automobile & Machine Co., which will manufacture automobiles, transmissions, etc.

Arthur W. Robinson, English manager of the Locomobile Co. of America, returned to this country recently. He was accompanied by Irving J. Norse, of the London office, and Kenneth N. Blake, who has been on the continent for 3 years in the interests of the Locomobile company. Mr. Blake will stay in America only long enough to devote some study to the new Locomobile models, while Messrs. Robinson and Norse will probably be here permanently, as the London business of the company is now in the hands of Jarrott & Letts, Ltd.

The house of representatives in Ohio amused itself last week by perpetrating a joke. The Jures bill, the object of which is to prevent the use of automobiles outside of municipalities, was the cause of the descent from the grave and serious standpoint usually taken by the house. The bill had been amended so as to prohibit threshing machines from being transported along country roads, and then Jones said the committee had taken liberties with his bill and were poking fun at his measure, which he thought was a solemn and serious matter. The house debated the bill for half an hour, adopted a half-dozen amendments and then referred it to the committee on banks and banking.

# AMERICAN MOTOR LEAGUE

## OFFICERS:

ISAAC B. POTTER, President,  
Potter Building, New York.  
CHARLES E. DURYEA, First Vice-Pres.,  
Reading, Pa.  
W. GRANT MURRAY, Second Vice-Pres.,  
Adrian, Mich.  
S. W. MERRIHEW, Third Vice-Pres.,  
154 Nassau St., New York.  
ROBERT L. STILLSON, Secretary,  
156 Nassau St., New York.  
FREDERICK B. HILL, Treasurer,  
32 Blufford St., Boston.

National Headquarters:  
150 Nassau Street, New York



CHAIRMAN OF NATIONAL COMMITTEES:  
LEGISLATION—  
George B. Bidwell, New York, N. Y.  
ROAD MOVEMENT—  
U. E. Olin, Lansing, Mich.  
LOCAL ORGANIZATION—  
Charles F. Potter, Denver, Colo.  
TOURING—  
W. H. Baker, Buffalo, N. Y.  
TECHNICAL—  
Charles E. Duryea, Reading, Pa.  
MEMBERSHIP—  
Frank A. Egan, New York, N. Y.  
SIGN BOARDS—  
John B. Price, Haleson, Pa.  
RACING—  
A. G. Batchelder, New York, N. Y.  
PRESS—  
Joseph Estoclet, Philadelphia, Pa.  
HOTELS—  
Francis N. Bain, Newburg, N. Y.

## OFFICIAL BULLETIN

### GOOD ROADS IN CONNECTICUT

Hon. James H. MacDonald, state highway commissioner of Connecticut, called at League headquarters last week and his account of the progress of the good roads work in his state filled a very interesting hour. Every town in the state has officially declared in favor of improved highways and filed a petition for state aid under the laws passed for that purpose. The recent convention of American road makers at Hartford was one of the most enthusiastic gatherings that ever came together in the furtherance of a peaceful mission. Delegates were present from all parts of the country and the large attendance from agricultural societies and from farming districts was an eye-opener to the politicians who have been prone to stand aloof from the agitation which began with the wheelmen some 18 years ago and has now taken hold upon the good sense of every man who claims to have any. Commissioner MacDonald lives close to the people of Connecticut and by his plain, practical methods and honest administration has endeared himself to the farmers, and the business men who reap the most immediate benefit from his work.

### ROUTES TO ST. LOUIS

Realizing that St. Louis will be the popular objective point among touring automobilists during the coming summer, the officers of the league are preparing and will shortly issue printed information describing through routes in detail from each principal city in the United States and Canada to the big exposition. For convenience of reference these routes will be divided into three classes, being routes from points east of St. Louis; 2, routes from points west of St. Louis, and 3, branch and connecting routes. All local consuls and consulate officers of the league will be called upon to supply detail notes and memoranda, from which these routes may be accurately recorded in their relation to the particular localities where these officers reside; but this means of information must of course be supplemented by such voluntary aid as will come from the large rank and file of individual members. The league is well equipped to collect and disseminate the sort of information which this undertaking calls for, but the total mileage to be recorded is great and the possibilities of error are many, so that reliable information from every source will be gladly received.

These are mere suggestions of "trunk line" routes from the East. They are being revised,

corrected, extended, amplified and simplified, under the direction of the national committee on touring and all information and corrections respecting these routes or any other important routes leading to St. Louis should be sent to headquarters, 150 Nassau street, New York. There will be many branch routes running from small towns and some from important cities to the main routes and it will be the aim of the committee to complete its work by May 1.

### BOSTON TO ST. LOUIS

1—From Boston via Fitchburg, Gardner, Greenfield, North Adams, Albany, Schenectady, Utica, Syracuse, Rochester, Buffalo, Erie, Cleveland, Norwalk, Fremont, Toledo, Wausau, Bryan, Butler, Kendallville, Goshen, Elkhart, South Bend, Valparaiso, Chicago, Joliet, Wilmington, Pontiac, Bloomington, Springfield, Litchfield and St. Louis. Total distances from Boston—to Albany, 189 miles; to Buffalo, 500; to Cleveland, 688; to Chicago, 1,116; to St. Louis, 1,420.

2—From Boston via South Framingham, Worcester, Palmer, Springfield, Pittsfield and Albany. Thence by route 1. Total distance about the same.

3—From Boston via Worcester, Springfield,

Hartford, New Haven, New York, Trenton, Philadelphia, Harrisburg, Pittsburg, Zanesville, Columbus, Springfield, Dayton, Richmond, Indianapolis, Terre Haute, Effingham, Vandalia, St. Louis. Total distances from Boston—to New York 250 miles, Trenton 319, Philadelphia 350, Harrisburg 453, Pittsburg 709, Zanesville 849, Columbus 904, Dayton 973, Indianapolis 1,081, St. Louis 1,320.

### ROUTES WANTED

The committee is especially in need of information as to the best routes from points north and west of St. Louis, and from points in Kentucky and Tennessee.

### MAPS WANTED

When descriptions of routes are sent in they should be accompanied by maps if practicable and by pen or pencil sketches whenever these will add to the clearness of the written memoranda. Town and county maps are sometimes conveniently at hand and from these a sketch or tracing may be made and the best roads indicated by heavy black or red lines. The sender need not hesitate to add the fullest descriptive notes and information designed to aid the touring stranger.

### BEST HOTELS

The league requests all automobilists to aid its officers in making a list of good hotels, and a list of bad ones. By the term "good hotels" is meant hotels where the accommodations are ample, clean and comfortable, the food palatable and well served and the proprietor honest enough not to treat an automobilist as a culture treats its prey. Automobilists touring to St. Louis will have special need of this sort of information and the league will welcome all communications that will aid it in making its list of reliable hotels complete. When a hotel is known to be bad, or is for any reason to be avoided, no automobilist need hesitate to report such fact.

### REPAIRS, SUPPLIES, STORAGE

The man who runs his car to St. Louis will have need to look for supplies and perhaps now and then for repairs along the route. The league will be glad to receive the names and addresses of all proprietors of shops, stores and stations where the tourist may obtain supplies and repairs, and where he may have his car safely kept during his stop in town. Such information will be arranged and printed in its proper place and will be placed in the hands of automobilists who attempt the St. Louis trip.

### THE AMERICAN MOTOR LEAGUE

is an organization to promote the interests of all users of motor vehicles; to ascertain, protect and defend their rights; to oppose and prevent the enactment of unreasonable and oppressive laws; to encourage the use of motor vehicles by agitation and instruction; to provide its members with printed routes, maps and guide books by which touring may be facilitated and encouraged; to promote the work of improving the public roads and the erection of proper guide boards, and other signs necessary to guide and warn the users of motor vehicles; to select and appoint official hotels repair shops and supply stations where its members may obtain reliable service at reasonable rates.

### WHO MAY BECOME A MEMBER

"Any man or woman, 18 years of age or over, of good moral character and respectable standing, friendly to the motor vehicle and its interests, shall be eligible to membership."

(Constitution, Article 2, Section 1.)

The League is extending its membership in all parts of the country. We invite all friends of the movement to join and aid in building up a powerful organization.

NO INITIATION FEE. ANNUAL DUES \$2 IN ADVANCE, OR \$3, INCLUDING 1 YEAR'S MEMBERSHIP TO MOTOR AIDE.

# MOTOR AGE

VOL. V. NO. 10

MARCH 10, 1904

\$2.00 Per Year

## BUFFALO SHOW OPENED BY CLUB MEN



**B**UFFALO, N. Y., March 8.—Fluttering badges of members of the Buffalo Automobile Club were conspicuous in the city streets yesterday and the friends of the club hurried through their business in order to get home early to dress for the opening of the automobile show at convention hall at 8 o'clock this evening. The show had become a reality.

The opening night was designated as club night, and nearly every member of the club was present to participate in the exercises. This is the second annual show under the auspices of the club and it is held this year under the joint management of the club and the Buffalo Trade Association.

Everything was in readiness when the hour for opening arrived. The exhibits were all in place and the exhibitors, looking fresh and vigorous, were in waiting for the throngs of well-dressed people which soon filled the hall to overflowing.

The electrical display was magnificent and reminded one of the displays which made the pan American exposition famous. The decorations of the stands were in harmony and the entire hall presented a scene of beauty.

As the visitor entered the door he was handed a program the cover design of which showed the favorable conditions to send the automobile in Buffalo. The design represented a buffalo in full stampede, closely pursued by an automobile, which was in turn pursued by a mounted Indian. Both the Indian and the driver of the automobile carried lariats with the evident intention of capturing the buffalo. This honor clearly fell to the occupant of the automobile, and it was demonstrated that the only way to get "a head of buffalo" was to have a motor car—and incidentally to belong to the Buffalo Automobile Club.

The show will last throughout the week, and the indications are that it will be an immense success. Automobile men who attended the show yesterday say it will eclipse last year's exhibition in every way. There is not a vacant space in the building, while last year space could be had almost for the asking.

The George N. Pierce Co. is showing the Great Arrow four-cylinder car, 24.28 horse power, the Arrow double-cylinder, 15 horse power, the Stanhope four-passenger car and the Stanhope two-passenger car with coupe top, and a Stanhope chassis.

The Roe Automobile Co. shows the Peerless touring car and chassis; also the Autocar chassis and a touring car.

The Buffalo Garage, Buffalo agent for the E. R. Thomas Motor Co., exhibits the Thomas, the Thomas touring car, the Thomas Flyer, with canopy top, and the Thomas Auto-Id.

The Pope-Toledo touring car, in both two and four-cylinder patterns, is exhibited by the Bison Motor Co.

J. A. Cramer is showing the Ford single-seat runabout, the Ford touring car and the Ford with a doctor's top. The cars are decorated with blue ribbons, and the show is termed the blue ribbon exhibit.

P. W. Eigner is showing the Twelvemile runabout, the same car with a down-sleeper seat, the Waverley electric runabout and the Waverley Stanhope.

The G. K. Machin Co. shows the Red Jacket touring car and an extensive line of automobile lamps, both oil and gas; also horns, as well as Monogram lubricant and a full line of Appleton engine lighters.

G. H. Poppenberg has the full line of National electric, the Queen small touring cars, the little Michigan runabout, the Rambler motor cycle and the Dumont touring car, one with canopy and one without.

Flint & Kent have a very attractive line of proper automobile wearing apparel for ladies, including leather jackets, ulsters, dusters, suits, caps, gloves, goggles, leggings, capes, waterproof covers and blankets, all of the French make.

Walter I. Willoughby shows the two models of the Crestmobile. The remainder of this exhibit was not received in time for the opening.

The Electric City Cycle Co. has the Reliance car, the Glide runabout and the Reliance motor cycle.

The Budger Brass Mfg. Co. shows its usual display of oil and gas automobile lamps.

Kleinhaus Co. are showing a very complete line of men's automobile wearing apparel.

W. U. Watson exhibits the Wayne touring car.

The Centaur Motor Co., which has the largest exhibit, is exhibiting eleven cars, among which are the Packard, Gray Wolf, the Packard chassis, the Cadillac, including model B, surrey and the model B chassis. Two models of the Yale are shown, C and B, and the Franklin four-cylinder air-cooled runabout model B with tonneau, and the 24-horsepower

Apperson touring car. In this exhibit is also the Clement.

Hafer & Meadows have St. Louis 9-horsepower runabout and two St. Louis touring cars.

The W. C. Jaynes Automobile Co. exhibits the Olds, Olds touring runabout, Olds touring car and Olds railroad car, the chassis of Olds runabout and two Winton touring cars, one with canopy top; also the Darracq and the chassis of the same model.

The Buffalo Motor Car Co. shows a Columbia haulin, Columbia victoria, Columbia brougham, Columbia four-cylinder touring car with canopy top, Pope-Hartford car and the

bile lamps; the Prescott Automobile Mfg. Co. shows for its Buffalo agents, the Buffalo Garage Co., two of the Prescott steamers, one with a doctor's top; the Covert Motor Vehicle Co. is showing models of the single seat runabout and a chassis of the same; J. A. Worthington, three models of the Indian motor cycle; Aurora Automatic Machinery Co. two models of motor-cycles.

The Standard Oil Co. has a very attractive exhibit of oils for the use on automobiles; the Lackawanna Motor Co. shows marine and automobile engines; Ephraim Bros., the Elmore two-cycle motor touring cars and runabouts.



MOTOR AGE

A GENERAL VIEW OF THE SHOW IN THE GRAYS' ARMOY AT CLEVELAND LAST WEEK

air-cooled touring car. This company is also exhibiting motor boats. The electric display of this company received a great deal of favorable comment, consisting of four large electric signs.

The D. H. Lewis Co. shows a full line of Rambler automobiles, including the model E single seat runabout, model G single seat runabout, model H small touring car, the delivery wagon, model K touring car, and the model L touring car with canopy top.

The Jones-Corbin Automobile Co. shows the model A single-cylinder runabout, the model B double-cylinder runabout and a chassis of the model C, 16-horsepower light car.

The Buffalo Automobile Exchange exhibits an Apperson Bros. touring car, and Haynes-

chassis of the large Columbia touring car.

The Duquesne Motor Car Co. has the Duquesne four-cylinder air-cooled car; Queen City Automobile Exchange three models of the Orient Buckboard and a Knox; Buse Automobile Co. two models of the White steamers with canopy tops, two Northern runabouts, one with canopy top, and a Northern touring car; Alex Weller Co. one model of the Stevens-Duryen; Buffalo Gasoline Motor Co. five models of marine engines, four-cylinder, four-cycle.

The Nernst Lamp Co. is showing a new electric lamp for commercial purposes for which it claims 50 per cent economy over any incandescent system.

The Twentieth Century Mfg. Co. displays its usual attractive exhibit of oil and gas automo-

The show in every way bids fair to be a commercial success, both for the promoters and the exhibitors. The local club is anxious to make it so for it intends fitting up its club-rooms with the proceeds and is naturally bustling to make the attendance record breaking. If the attendance is good throughout the week as it seems likely to be the exhibitors are bound to enjoy a profitable week for the goods shown are representative lines which have been selling well at all the other shows.

Buffalo has always been a good selling center and the interest in automobilism last year was exceptional for a city of the size. The show promises to inaugurate a season of quick sales and great increase in local enthusiasm in the Bison City.

# SOLD 300 CARS AT THE CLEVELAND SHOW

Cleveland, O., March 7.—The Cleveland show, which closed Saturday night, was a record breaker from every point of view. The attendance was much larger than that of the previous Cleveland show and several tradesmen who have followed the circuit of the various shows this year and last, claim that the crowds were larger than at any previous local show. The actual sales during the week eclipsed even those of last year's Cleveland exhibition, which was a tremendous success from a business standpoint.

Treasurer Will Sayle states that nearly 35,000 people paid admission during the week. Friday night there were 6,500 paid admissions and Saturday night 7,500. These figures make no account of the numerous passes that were given out to members of the club, tradesmen from out of town, as well as exhibitors; neither does it include a large amount of "paper" that was placed with Cleveland's swell set for the opening evening.

The actual business closed at the show was something remarkable in view of several conditions that did not exist last year. Last year many agents from the surrounding towns did not close their contracts until they had seen the lines at the show and a considerable portion of the sales last year were to dealers. This year the agents closed early, the majority of them being satisfied with the lines they had last year. As far as the public was concerned, there was more of an incentive to make purchases at the show last year than this, because a year ago manufacturers were far behind on orders and would not agree to make deliveries for from 60 to 90 days, hence buyers placed their orders without delay. This year buyers are aware that manufacturers are in much better shape, and that in the majority of cases agents can make deliveries as soon as the season opens. More cars were shown this year and as the crowds were much larger there was less opportunity of making thorough examinations of the various lines; hence many people made half promises of buying and delayed the closing of the deals until cars could be examined at their leisure and thoroughly tried out. The cold rainy weather prevented many would-be purchasers from securing the demonstrations necessary to convince.

But despite these drawbacks, the actual business was larger than that of last year. A careful estimate made from statements secured last Saturday night indicates that over 300 cars, valued at more than \$400,000, were sold at the various stands. It is safe to estimate that fully twice that number of cars will be sold as the result of the show, because every one present had a large number of promising provisional orders, while the general tone of the inquiries indicates that despite the talk of business depression, the automobile business will be heavier than it was last year.

More high priced cars are being sold than there were last year. The high powered four-cylinder machine, the limousine body and the car with the canopy top have struck the popular fancy and in a great number of cases persons who owned lighter cars last year have bought more expensive cars for this season. Among those that can afford it, the fad for changing cars each season to secure the latest model, appears to be as strong as it was in the old bicycle days. In one instance, the mem-

bers of a family of five, each sold his old machine and bought one of later pattern, apparently with as little compunction as though the machines were bicycles at \$50 each.

Every exhibitor of automobiles at the show reported sales, and some of them claimed to have made so many that they could not figure them up Saturday night, the various salesmen not having turned in their statements.

The Ohio Oldsmobile Co. doubtless had the most sales, as was the case last year. Manager Ralph Owen reported actual orders for eighty-two Oldsmobiles, sixteen Franklins and fifteen motor boats. Thirty of the Olds were the \$950 touring cars and others were runabouts. Three of the motor launches were of the large size, selling at \$550. The total business figured over \$92,000, somewhat smaller than the company's sales last year, but did not include sales to dealers, as was the case then. Neither did it include business done by A. Auble, Jr., the agent from Akron, who made several sales among people from his town; or business secured by Sidney Black, who has a branch store in Cincinnati, who sold several cars to parties from the southern portion of the state.

The Ohio Motor Car Co. did a handsome business, its sales aggregating twenty cars of various makes. Five of these were Columbia two-cylinder gasoline cars and seven were Stearns touring cars. One of the Stearns cars will be a special \$5,000 semi-racing machine to be built for K. V. Painter, a local enthusiast who has dabbled in racing. E. Tom, Feteh, formerly with the Stearns company, is now with the Ohio Motor Car Co. and will pay particular attention to the Stearns line.

The Winton folks were elated over the business they secured. Sales Manager Charles B. Shanks stated that the direct business resulting from the show would easily aggregate sixty cars, although the actual sales at the show were probably not more than one-third that number. The canary finish shown by the Winton company attracted much attention and will be popular this season.

Walter Baker, whose company exhibited through the Price Brothers Carriage Co., states that about fifteen Baker cars of various patterns were contracted for during the week, while the missionary work done would result in a great many more sales. Several of the sales were of the new park survey illustrated recently in *Motors* magazine. The Baker company already has orders for all it can turn out.

Manager George S. Waite of the White garage admitted that his company had missed it by not exhibiting at the show last year; judging from the results obtained during the past week. His sales aggregated fourteen White steamers, one with a limousine body, eight with tops and four without tops, a handsome total of \$30,000 worth of business.

The Peerless company, which also missed the show last year, was agreeably surprised with the results. It sold ten cars of the four-cylinder pattern, at \$3,500 and upwards each.

Harry S. Moore, agent for the Orient Inck-

board, took second place in number of sales. He sold fifty-seven buckboards, a portion of them to dealers in neighboring towns. His Star machine also attracted much favorable comment and he has a good business in sight.

The Royal Motor Car Co., which exhibited through T. C. Whitcomb, sold nine cars, six of the four-cylinder cars at \$3,000 and three of the two-cylinders at \$2,300. Mr. Whitcomb also did a fine business with the Rambler and Ford lines, and William N. Booth & Co., who will handle these lines in the east end, secured several orders.

Just Bolin, the clever little Frenchman, who, with A. Sopper, conducts the Automobile & Garage Co., expressed himself as "charmed" with the Cleveland show. The company sold five Autocar runabouts, three touring cars, three Packard touring cars, one Waverley physician's wagon and one Waverley station wagon, about \$25,000 worth of business. Before the show it placed seventy Autocars with a number of agents through the state; also several Packard touring cars.

R. H. Magoun, agent for the Pope-Toledo was well satisfied. He sold two \$3,500 four-cylinder cars and two two-cylinder cars.

The Fredonia company, of Youngstown, and the Thomas company, of Buffalo, were both repaid for coming to the Cleveland show. The former reported five sales and the latter six.

Paul Gaeth, with the Gaethmobile, took several good orders, as did Otto Konigswill with the Ottokar. Seymour Bros., who showed the Michigan, the smallest machine at the show, disposed of three. The Automobile Top & Supply Co. sold several Coupes, Brew & Hatcher, with their new four-cylinder car were not looking for orders, as they claim to have sold their output for this year, but they did not turn away the three or four people who offered to buy. The Geneva Automobile & Mfg. Co. also secured several good orders.

The Bullock-Ileresford Mfg. Co., of Cleveland, exhibited a full line of its well known Igniters at the show and did an excellent business. The exhibit was completed too late for mention in the last issue.

Emil Grossman, of New York, attracted considerable attention with the new Continental coil which is of the French style. In this coil the secondary and primary windings are both silk covered and the core is made from Swedish iron, which is possessed of high magnetic qualities. The coil is made in all sizes and with ease in any finish. The sale of Continental goods was flourishing.

Thursday evening the hundred or more exhibitors enjoyed a banquet and smoker tendered by the committee in charge of the show. A number of the leading tradesmen made appropriate remarks.

Circus methods were used in cleaning up Saturday night. The band had not stopped playing before things began to fly and before 2 o'clock in the morning five car loads of automobiles were in express cars and headed for Buffalo, where the local show opens today. The Baker electric was the first machine in place last Monday and the first out Saturday night. They filed out in an orderly manner with the last of the crowd and sped to the station under their own power, a trick which was impossible with the cars that used gasoline, on account of fuel not being allowed in the building.





# MOTOR AGE

Published Every Thursday by  
THE TRADE PRESS CO.

1303 MICHIGAN AVENUE CHICAGO  
Telephone Calumet 2022

New York Office, 124 West 19th Street,  
London Office, American Publications Bu-  
reau, 28 Manor Park Rd., Harington, N. W.

Entered at the Chicago Post Office as Second  
Class Mail Matter

Subscription, Two Dollars per Year  
Foreign Subscription, Four Dollars

Any Newsdealer may obtain Mims Age through  
the Western News Co., Chicago, or any  
of its branches, on a returnable basis

## THE ST. LOUIS TOUR

**W**E HAVE had in this country all kinds of automobile contests—track races, road races, straightaway speed trials, endurance tests, brake tests and gymkhana. All have helped to popularize the automobile, to demonstrate its fitness as a universal vehicle, and the road events have shown the greater necessity for better highways than for better automobiles.

There will be a much different event than any of these this summer, and a greater event than even the mud plugging, water defying endurance contest last fall. It will be a general assembly of automobilists from all over the country at the world's fair in St. Louis. It will be the gathering into one knot ribbons of motoring drawn St. Louisward from the four winds. It will be informal and not for speed. It will be a pleasure affair, and a great demonstration of automobilism in one. It will be an endurance run, in which great numbers will force upon the public the untold possibilities of automobiles in comfortable and convenient road travel over great distances. It will inaugurate an era of cross-country travel by public highway in preference to travel by steel rail. It will be a national experience of the difficulties in the use of poor roads and of the blessings of good roads.

All this is a great undertaking, but a perfectly feasible one on account of its informal character. Motorists by scores, hundreds and thousands simply set their eyes on St. Louis and turn their steering wheels toward the chosen Mecca. In long, winding strings they make their many courses over the land, and with but a lenient schedule to govern their moods drive in their own way, at their own sweet will to the capital of 1904 American motoring.

The scheme is immense in its very simplicity. None of the fever of a contest to mar the strict enjoyment of the trip and none of the bustle and nervous tension of an affair of sporting consequence to make it a burlesque. By devious routes and in parties great and small the country's enthusiasts will all bend for a fixed point, and in their travel show the whole wide world that for getting overland to any place under normal traveling conditions there is no surer, safer, or more enjoyable way than that of automobilism.

An endurance run shows what can be done under stress. This projected St. Louis tour will show exactly what automobilism is when undertaken in the way that the average person wishes to participate in it. This demonstration of motor car utility is bound by the nature of the event to be impressed upon many times the number of people than would the results of a set contested over one course. Being spread over the whole country, it passes through thousands of cities, towns and hamlets whose people cannot fail to note its progress. It strikes the territory of every newspaper east of the Rocky mountains, and makes good news matter for each. A procession of signboards could not better advertise the American automobile than will this gigantic pleasure party.

The walls of the Mecca in sight, the presentation of the performances of the hundreds of varieties of motor cars which have made the trip will be gorgeous in its spectacular trimming. These cars have come over dirt, mud, gravel, macadam and corduroy from east, New England, central, southern, southwestern, western, northern and northwestern states. The papers and the people's mouths have been full of their coming. They are here. They mass in one great cavalcade and to the tune of their mighty untold sputter march to the world's fair. Little else in the line of a spectacle will be worth seeing in St. Louis that day.

Nor is the spectacle, the triumphal entry to the objective city, the end. Once the attention of the whole town and its many visitors gained and whatever sporting events, assemblies and tournaments crowd the next few days, cannot fail to arouse and sustain a great interest, which will be everlasting in its effect upon motoring and kindred interests.

The success of the enterprise is assured from the start if sufficient numbers are assured. It is up to the automobilists of the country to make its success by making its numbers. It is no factional affair. It is to be the co-operative event of all motoring organizations of all classes of automobilists. Each section of the country should make a strong representation. The call for participants is made to all. Let all who possibly can become a part of it.

## UNIVERSAL CHASSIS

**I**N a way the motor car industry is outstripping itself. It has been so successful in showing the public the advantages of the automobile as a new vehicle that it has brought about the creation of a public demand for automobiles as substitutes for horses and carriages as well as for additions to the older means of road travel. The public wants automobiles for all purposes. The demand is not limited to cars to be used as novelties in whatever shape they may come. There is a persistent and growing call for motor vehicles adapted exactly to certain conventional purposes.

The world is tired of the horse. It is not tired of runabouts, victorias, broughams, theater busses and coal wagons. It needs them all. They will some day all be propelled by motor. It is in the adapting of the motor car principle to all of the thousand and one specific purposes that the motor trade has ahead of it a bigger possibility, a bigger demand and a bigger task than the present condition of the trade suggests.

The distinctive automobile as a class vehicle cannot last long. Its successor is the car named by its purpose, not by the character of

its motive power. This car may be built for its purpose from the ground up and it may be built for its purpose only from the chassis up. A freight truck chassis would not serve well to carry milady's victoria. But there are numerous styles of carriages which a man may wish in his stable that may all be very well attached to the same running gear.

The number of different kinds of vehicles that must be provided to make the motor universal will be great. They are divisible in groups and the number of these groups need not be great. Each group would represent a distinct model of chassis. The number of chassis which the industry called upon to furnish the vehicles will have to make need not, then, be great.

There is a great field for the designer in this grouping of vehicles and the adapting of different chassis to the interchangeable body structures of each group of vehicles. It is both interesting and commercially profitable. It represents economy both in the use and in the manufacture of vehicles for all purposes and for all people.

**Is the road subject a dry subject?** The roads themselves were none too dry for those who made the endurance run last October. The same roads are there today; no better and no worse than thousands of miles of other roads in other parts of the country. They are dry and dusty in summer, soft and soggy in spring and fall and rough the year round. Shall we take up this proposition in a leave and manly fashion or shall we shrink from it in dismay and leave it for the accomplishment of a later and a more worthy generation?

Some of the automobile trade journals of England are complaining because royalty does not officially recognize the Crystal palace show, saying that the British car is ignored and treated as of no account by the powers that be. These editorial writers should cheer up. America has no royal family to boost the industry along, and even the president isn't making any strenuous efforts in an automobile way, but regardless of being thus handicapped the American manufacturer is trudging along pretty close to the head of the procession.

The automobile technical writer of the New York Herald has competition. This is from a "Pico newspaperman's nimble pen: "The A. A. Moores have a beautiful auto—by the way, we must all change that word to 'motor car'; it is the latest thing and used in the east and in England. Well, the Moores' motor car is a very large, improved affair with a glass in front which cuts the wind. Many of their friends no afraid to get out with them in it, lest in case of an accident the glass might cause frightful damage."

The Automotor Journal, of London, England, publishes pictures of "the Ormond-Daytona beach races held recently on this Californian beach." If the Automotor Journal will consult its geography it will discover that Ormond is "bloody near 3,000 miles from California, blimey!"

The automobile industry has caused more than one turn-over of technical ideas. The increasing use of the make and break form of ignition is but another example of the rapid changes that occur in our notions of what is right and what is wrong.



## AUTOMOBILING IN MOUNTAINOUS PORTO RICO



The Pictures Are by C. H. Martin,



An Enthusiastic New York Motorist,



Who Has Recently Been Touring the



Island With a "Waterless" Knox Car



## SCENES ALONG THE MAGNIFICENT MILITARY ROAD



## REEVES AGAIN MANAGER

### Empire Track To Be Under His Management—Big Events Already Planned—Racing News

New York, March 6.—Alfred Reeves has again consented to accept the secretaryship of the Empire City track, though he will continue his pre-war connections, embracing trotting, bicycle and automobile lines. The assumption of the management by so great an enthusiast over automobile racing as he is assures another series of high-class tournaments at the track, and at the Brighton Beach track also, which is practically now, so far as trotting and automobile racing goes, under the same control as the Empire course.

"I propose to run frequent meets at the track," said the hustling secretary. "The financial success of those of last season justifies their promotion along the same liberal lines. There are some drivers who think they can beat Oldfield and some makers who believe they can produce a faster machine for the track than the Winton Bullet. I am going to give them all a chance to prove it.

"When the question of the championship of America is settled I will then look to the other side for some one to put against him. The winner of the international cup race would be naturally the man most sought. I see Lamberjack talks about coming over with a Clementine. So much the better. He will be accommodated with a match and so will Edge and Jarrott, who are reported to be intending to come over also.

"I am a great believer in track racing. It best furnishes the 'personal equation' we hear so much about. In a track race, if the machines be anywhere near evenly matched, barring accidents, the best driver will win. We will probably give our first track meet on Decoration day. I expect that the mile and other records lost by Oldfield's performances in California will easily be regained this season, and that once more the Empire will prove itself the record track of the world for automobiles, as it is for trotters."

A party of automobile racing experts, embracing Chairman Pardington, of the racing board; Secretary Butler, of the A. C. A.; several well known drivers and cars, and several identified with the sport, will leave for Virginia Beach Friday for a 2-days' inspection of the course, with regard to determining its availability for the international team trials and the proposed racing tournament in May. Alexander Fischer has placed a Martin at the disposal of Chairman Pardington and Secretary Butler. It is probable that the speed possibilities of the 70-mile stretch of beach will be tested by F. A. La Roche with his Darracq, "Blue Struck," Harlan W. Whipple with his new Baltimore built flyer and L. P. Moores with one of the Peerless cars.

All friction between the Norfolk clubmen and the Virginia Beach Automobile Club is said to have disappeared. The former will promote local meets and the latter the big national tournaments. The Norfolk club will run a meet in April and May 9 has been set as the date for the Virginia Beach club's opening tournament.

Manager Lee Strauss is said to have found a building with 43,000 square feet of floor

space and intends to promote an automobile show in it during the racing week. The aggregate neighboring population is large. Baltimore and Washington are but a few hours' ride away and New Yorkers can get to the beach in a night's ride, by sea or railroad. The whole idea is to give the southerners a monster demonstration of the automobile's speed and practicability.

The A. A. A. racing board has taken official cognizance of the fact that F. A. La Roche, in driving his Darracq 5 miles in 4:01 in the first trial heat of the 5-mile open at Ormond scored a world's record for cars under 1,500 pounds, supplanting the 4:21 3-5 made by the Packard Gray Wolf over the same course this winter, and allowed the record.

Chairman Pardington has little doubt that he can gain the permission of the authorities of one of the Long Island counties for the 300-mile race for the cup W. K. Vanderbilt, Jr., has offered the A. A. A. The new automobile law legalizes speed contests on the road when the permission of the local authorities is secured. Mr. Pardington has written the members of the new board with a view to learning their convenience with regard to a date for an early meeting, at which a revision of the rules may be discussed and the season's campaign laid out.

The story of Barney Oldfield having arranged to race H. L. Bowden and S. B. Stevens at the Readville track, Boston, on Decoration day, finds small credence here. There was such a bantering talk of this character between the American champion and the Mercedes drivers at Ormond, but it was nothing more than an exchange of "jollies." It is not believed that either Mr. Bowden or Mr. Stevens has any track racing ambition. Some of the critics say that the rigidly built Mercedes cars are not well adapted for track racing anyway.

It is reported here that the E. R. Thomas Motor Co., of Buffalo, N. Y., is to enter the track racing game with a high speed car.

### WILL MAKE A TEST CASE

A petition has been filed in the superior court of Massachusetts by Harry L. Radford against the commonwealth, to determine whether the state is liable for \$1,200 repairs he had to make on his automobile which run into a wooden horse at Cherry Valley at 4 o'clock on the morning of October 23, 1902. Radford, his wife and two sons were on a tour from New York to Boston, traveling day and night. The state highway between Worcester and Leicester, through Cherry Valley, was being resurfaced, and a wooden horse, on which was a lantern, had been placed across the highway to prevent travelers from getting upon the torn-up roadway.

Radford claims that at the time he reached the place there was no light burning to warn him of the unsafe condition of the highway, with the result that his automobile ran against the wooden horse, damaging the car to the extent of \$1,200. The commonwealth put in evidence that the lantern had been lighted that night, and it claimed that its legal duty ended when it furnished a lantern properly lighted, and that it was under no obligation to keep watch to see that it was kept lighted throughout the night.

The English local government board is trying to impose a speed limit of 7 miles an hour for automobiles which weigh over 2 tons when empty.

## SYRACUSE CLUB PROSPERS

### Big Smoker and Lantern Slide Exhibition—State Association Will Establish Headquarters

Syracuse, N. Y., March 7.—The Automobile Club of Syracuse held a smoker last Thursday evening at the Yates hotel. It proved one of the most enthusiastic gatherings ever arranged by the organization. Thirty or more of the members enjoyed themselves in an informal way, dividing their time between a Dutch lunch and a lantern slide exhibition, showing everything from some exceptionally clear reproductions of the automobile races at the state fair last year to a number of well known local characters. A large number of the slides depicted New York roads—good, had and indifferent—no subject dear to the heart of every automobile enthusiast. Harry C. Pierce, chairman; Carl Ames and Winfield Chapin, comprised the committee having the smoker in charge.

The business meeting was a record breaker in point of initiation, sixteen new members being added to the roll. The new men are: B. Lyman Smith, W. S. Peck, Jr., Hendrick S. Holden, Fred R. Peck, John F. Huber, Ross L. Andrews, Frank A. Barton, Giles H. Stillwell, A. G. Holster, G. E. DeLong, Frank M. Kinney, Spencer C. Crane, William H. Bissell, Albert E. Petrie, E. H. Dann, of this city, and Theodore Coles, of Onondaga, N. Y.

Willett L. Brown, president of the club, gave a report of his recent trip to Albany with Attorney Giles H. Stillwell and Secretary Frederick H. Elliott, as representatives of the local club at a hearing on the Hill-Hotchkiss-Cocks bill, and in his opinion said the measure is almost certain to become a law. The bill at present is up for a last reading in the assembly and is expected out of the senate committee at most any time.

C. Arthur Benjamin, who acted as the club's representative at the annual meeting of the American Automobile Association at Chicago during the automobile show there, also gave a detailed report. He told of the success of the Chicago show and of the matters acted upon by the association. Secretary Elliott was re-elected the Syracuse club's director to attend the meeting of the New York state association and Hulbut W. Smith was named alternate.

The board of directors of the New York State Association of Automobile Clubs will hold its first annual meeting at the Yates hotel, this city, March 19. The board comprises eleven members, one from each club in the association. The matter of establishing state headquarters were between the months of May and November will be brought up for discussion and the probabilities are that the plan will be adopted. This action is advocated because of the central location and the large amount of business that will accrue in the office of the secretary and treasurer, Frederick H. Elliott, in connection with the club runs that will be made to the St. Louis exposition from all parts of the state.

Frederick H. Elliott, of the Century Motor Vehicle Co., has gone on a western trip, during which it is said he will confer with manufacturers of automobiles relative to interesting western manufacturers in the making of automobiles in this city.

Hulbut W. Smith, of this city, has been

appointed one of the committee which will have charge of the Automobile Club of America's tour to St. Louis, beginning July 26. Mr. Smith will have charge of the run between Albany and Buffalo.

Mr. Hubert VanWagenen, Jr., of New York city, daughter of Mr. and Mrs. James Stevens, of Rome, N. Y., has gone abroad to meet her husband, who is in France. They will meet at Paris and will go on an automobile trip through Southern France and Italy, returning to Paris. They will return to this country in September.

#### VEHICLE TESTS FOR PARIS

Between August 22 and September 4 the Automobile Club of France will hold a vehicle test competition which is expected to be the greatest of its kind yet held in France. There will be three distinct events, the first being reserved for commercial cars, the second for electric touring cars and the third a competition in controlling engines.

The commercial vehicles will be divided into two classes—those for rapid transportation, carrying from 1,650 to 2,000 pounds load forming class A; class B will be formed of heavy trucks, carrying more than 2,000 pounds load. Class C, third class is for the electric touring cars.

The distance to be covered every day by the vehicles of class A will average 80 miles, while 43 miles will be the daily average run for the vehicles in classes B and C. Those of the last named class will recharge every night at the stopping station. The competition for automobile control includes the distance covered and the speed at which one drives.

The program for each day is as follows: First and second day, consumption test around Lake Daumesnil, Paris; third day, Paris-Rheims run, to be made in 1 day by cars of class A, and in 2 days by the others; fourth day, Rheims-Mezieres run for class A vehicles and Rheims-Verdun run for those of the other two classes; fifth day, Mezieres-Valenciennes run for class A and Verdun-Valenciennes for classes B and C; sixth day, Valenciennes-Lille for all the cars; seventh day, show of the cars at Lille; eighth day, Lille-Arras; ninth day, Arras-Amiens; tenth day, Amiens-Rouen for class A and Amiens-Beauvais for the others; eleventh day, Rouen-Paris for class A and Beauvais-Paris for classes B and C; twelfth day, consumption test around Lake Daumesnil, Paris.

#### AUTOMOBILE SERVICE IN CONGO

The administration of the Congo Free State, Africa, has inaugurated an automobile transportation service from Lemba, near Matadi, to Songolabo, a distance of nearly 220 miles. Another road, 500 miles long, consisting partly of water ways and partly of automobile service, will permit one to reach the Nile. Automobiles are used over nearly two-thirds of its total length.

Steam vehicles have been used, but, while giving fair service, are too heavy, often sinking into the ground. Experiments have demonstrated the fact that these cars should not weigh over 4 tons. A new style of car with flash boilers has been tested during several months in Belgium, where it has given good results and will replace the car now being used. This vehicle weighs only 2 tons, when fully equipped, and is able to carry a load of 4,000 pounds.

## SEEK ROAD INFORMATION

### Congressmen Becoming Interested In the Matter of Highway Improvement and Ask for Figures

Washington, D. C., March 5—A resolution has been introduced in the house of representatives by Representative Wiley, of Alabama, to the effect that the secretary of commerce and labor be authorized and directed to have the director of the census investigate the subject of public-road construction in the United States, and to obtain and compile all available statistics from the different states, counties, and municipalities which may tend to show the cost of construction, as well as maintenance, of roads built under legal authority during the past few years, and also the amount and character of the indebtedness thereby incurred, when and how payable, and to ascertain the states whose constitutions prohibit them from engaging in works of internal improvement, as well as those which permit them to authorize the issue of bonds for the construction of highways. When the investigation is completed the statistics compiled are to be published in the form of a bulletin, for the information of the public, in connection with the bills pending in both houses of congress looking to a uniform system by which better post-roads will be constructed throughout the country, and more efficient mail facilities thereby furnished to the people.

More than ordinary interest attaches to the proposed investigation and the results cannot fail to interest all who are striving for the betterment of American highways.

An interesting question has recently been brought up regarding the right of Representative Brownlow, author of the bill now pending in congress appropriating the sum of \$24,000,000 to improve the national highways, to use his frank in sending good roads literature throughout the country. Some of the good roads speeches that have been made in congress this winter have been printed in pamphlet form for distribution generally, one page of the pamphlet being devoted to a cartoon depicting a horse struggling through a muddy road and pulling a small load, which could be pulled with ease over a decent road. As this cartoon was not a part of any of the speeches in question and has never appeared in the congressional record, it would appear that it is unfrankable. Representative Brownlow has referred the matter to the postoffice department for its ruling, as he does not wish to violate the postal laws in furthering the good roads question, a question that is very dear to his heart. The outcome will be awaited with interest.

#### HORSEMEN CHANGE HEART

There is a possibility that the race meet on Decoration day at Readville, Mass., may be abandoned by the Massachusetts Automobile Club. The racing committee of the club had planned a meet for that place on that day, but circumstances have arisen which make it seem doubtful in present.

The club has had an option on the track since last year, but there was much opposition on the part of some of the members of the New England Trotting Horse Breeders' Association to allowing an automobile race on it. The late J. Malcolm Forbes was one of those most op-

posed, and he was away when the option was given. He was much displeased when he learned that a race meet was to be held and it is a question now whether or not the directors, out of a matter of sentiment and respect for the wishes of Mr. Forbes, will allow an automobile race meet to be held on the track.

Another fact which raises a doubt as to the meet being held at all is that another organization is thinking of running a race meet on that day and this would naturally cause more or less friction.

#### HOPE TO IMPROVE CHICAGO STREETS

Chicago, March 8—An aggressive campaign will be made this spring by the good roads committee of the Chicago Automobile Club in its effort to better the conditions of the streets of the city and the roads of the surrounding territory. Chairman Sidney S. Gorham has suggested several improvements and these will be taken in hand and vigorously promoted by the club. A tour of inspection will be made by members of the good roads committee, accompanied by a photographer, and pictures of the bad spots in the streets will be taken and submitted to the city authorities as an object lesson in road making.

The membership of the Chicago Automobile Club is increasing in a manner eminently satisfactory to the officials. There are now almost twice as many members as there were at the beginning of the year and applications are being filed daily. The older members are becoming aroused and are soliciting their friends to join and help the good work along. The listless, sleepy air of ancient respectability that formerly hung around the club house is all gone, and instead there is the busy activity characteristic of Chicago. Every day sees an increasing number of the members gathering at the club during the luncheon hour, and in consequence members who knew each other by name only are now becoming personal friends. These daily meetings are stimulating in an automobile way, and assist in bringing out the ideas of the different members regarding the betterment of the club. President John Furson has been out of the city for a fortnight, but will return the latter part of this week, and early next week a conference will be held with the law department of the city, at which an ordinance governing the driving of automobiles will be prepared.

#### OLD ORDINANCE REVIVED

The automobilists of Los Angeles, Cal., have suddenly discovered that it is a crime and misdemeanor, according to the laws and ordinances of that city, to permit any vehicle to stand unattended more than 20 minutes within the corporate limits. It was at first supposed the ordinance referred only to vehicles drawn by horses, mules, asses or oxen, but a recent more careful scrutiny reveals that all vehicles, whether drawn or driven by any of the aforementioned animals, was subject to its jurisdiction. Therefore, the Automobile Club of Southern California called a special meeting last week and, in convention assembled, requested the city authorities, if they would be consistent, to enforce all ordinances on the statute books. As there are quite a number which have been suffering from innocuous desuetude, it is probable that the automobilists will not be compelled to procure hitches for their automobiles when they drop in at the corner grocery to buy gasoline and get the latest market price of eggs and butter.

## RAISE GARAGE PRICES

### Hartford Dealers Figure They Have Been Doing Charity Work Long Enough—Other Abuses

Hartford, Conn., March 7.—Garage managers plan to get together during the coming week with a view to raising the price of storage. The three leading garages of the city have been charging \$10 a month for care of vehicles and storage, with \$5 a month for dead storage. None of the garage proprietors have made any money on this basis and the only remuneration has come in repairs. With the perfection of automobiles and the less likelihood of repairs, it has been thought necessary to raise the price to \$15 a month, which is about two-thirds of what the same service costs in the larger cities. One garage proprietor has so far stuck out for the old rate, but it is now thought that he will fall in line with the movement.

Hartford automobile agents are endeavoring to correct the demonstration nuisance, which assumed large proportions last season. It has been difficult to choose between the possible customers and the seekers after free rides. Agents will continue short city demonstrations without price to those whose ability to pay for a vehicle in the event of liking it well is indexed in their apparel. Long demonstrations to nearby cities making runs of 75 and 100 miles are to be charged for at lively rates, which charge will be remitted in the event of a purchase. In this way the Hartford dealers think they will do away with the idlers who are only looking for a free ride.

F. L. Caulkins, of Middletown, drove a Knox car from Springfield to his home city last week when the snow was heavy and the roads were but poorly broken out. One wheel ran in the sleigh track, but the other plowed through the snow for 26 miles, tiring machine and driver alike. The run to Middletown, 18 miles, was accomplished easier, but the trip was a hard one. Nevertheless it was made in fairly good time and Mr. Caulkins says the car behaved beautifully.

S. A. Miner has opened his new station, in which he has three times the ground floor space that he enjoyed formerly with four floors of the same size above. Forty cars are now quartered on the main floor, the repair departments being on the floor above. Captain Miner has made delivery of Knox and Olds cars and has a couple of cars of the latter en route.

Frank Bradley, who has been the agent of the Peerless car in southern New England for two seasons and who has toured all over New England selling cars, has resigned his post to join the selling force being banded together by Manager Frank Fanning, of the Chicago branch of the Electric Vehicle Co. Mr. Bradley is a motor car driver to whom one has been asked to tell him what fear is, and he has been a successful salesman.

### PARTS MEN ORGANIZE

The Parts and Accessory Manufacturers' Association was organized in Cleveland last week, the object being the protection and promotion of the mutual interests of the trades concerned, and of the automobile industry generally. About fifty makers were present at the meeting. The constitution and by-laws were submitted and a vote on its adoption was taken

by mail. The officers and directors elected are as follows: President, D. J. Post, Veevor Mfg. Co., Hartford, Conn.; first vice president, Howard E. Raymond, B. F. Goodrich Co., Akron, O.; second vice president, H. W. Chapin, Brown-Lipe Gear Co., Syracuse, N. Y.; third vice president, Phineas Jones, Newark, N. J.; secretary, F. E. Castle, Twentieth Century Mfg. Co., New York; treasurer, W. S. Gordon, Standard Welding Co., Cleveland, O.; directors, H. T. Dunn Fisk Rubber Co., Chicopee Falls, Mass.; H. H. Timken, Timken Roller Bearing Axle Co., Canton, O.; H. O. Smith, G. & J. Tire Co., Indianapolis, Ind.; R. H. Welles, Badger Brass Mfg. Co., Kenosha, Wis.; P. L. Husey, Hussey Drop Forging and Mfg. Co., Cleveland, O.; F. C. Billings, Billings & Spence Co., Hartford, Conn.; V. G. Apple, Dayton Electrical Mfg. Co., Dayton, O.

### NEW TRACK IN NEW ENGLAND

Boston, March 6.—W. J. Morgan passed through Boston yesterday, after having completed arrangements for the construction of a 2-mile automobile race track in the Bretton woods, at Fabyans, N. H. The track is to be 80 feet wide on the stretches and 100 feet wide on the turns, and banked 20 feet. It is estimated that it will cost something like \$30,000 and is to be ready for use by July 1. Inside the automobile track is to be constructed a mile horse track, on which running and trotting races can be held. The track will be used for racing beginning July 11, at which time a national hill-climbing contest is to be held at Mt. Washington, the track being a part and parcel of the hill-climbing proposition. The holding of a hill-climbing contest at Mt. Washington was being considered by several local men, and six machines had been entered for a private trial to be held in July. Anderson & Price, the hotel proprietors of Ormond, Fla., are backing the enterprise, so there is no question that the hill climb will be as successful as was the racing at Ormond, the idea being that the same capital behind this latest scheme is the same as that interested at Ormond.

The interest in the automobile show which opens Monday next is at fever heat, and the indications are that it will be equal to the Chicago and New York exhibitions, even though the hall space is not so great. This is made possible owing to the provision that calls for the display of but one machine of a given model, so that while the show may be lacking in number the quality will not be overlooked.

### GOOD WEATHER IN CAPITAL

Washington, D. C., March 5.—A few days of good weather has worked wonders for the automobile trade of this city. The dealers accomplished more during the past week in the volume of business transacted than at any time since the beginning of the year, and the general impression is that this is going to be a record-breaking year in the way of sales. Several carloads of automobiles were received here during the week and at the present time the trade is prepared to meet almost any demand.

A fine display of automobiles is to be found at the local salesroom of the Pope Mfg. Co., on Fourteenth street. The full Pope line is shown, together with the Cadillac and Waverley electric. A carload of Cadillacs was received during the week and a carload of Toyotas is on the road.

## CUSTOMERS PAY FREIGHT

### Excessive Carrying Charges Put On the Purchaser—Matter Being Investigated by N. A. A. M.

New York, March 6.—The complaints as to excessive and unfair discrimination by the railroads against automobiles in the matter of freight rates, referred to in a recent dispatch to MOTOR AGE, have been referred by the N. A. A. M. executive committee to a special committee composed of J. Wesley Allison, W. R. Jones and R. D. Chapin.

An automobile which was previously rated at 4,000 pounds, is now classified at 6,000 pounds minimum. At the same time the carload minimum has been reduced from 10,000 to 8,000 pounds. This would make the approximate rate of shipment of a car from Chicago to New York, \$50. It now costs as much to send an automobile to California as it does to ship it to Australia by way of England.

The purchaser of an automobile in Boston will hereafter have to pay the freight from the factory, according to the new rule adopted by the dealers of that city. This move was caused by the advance in freight rates made January 1, which made the freight on automobiles twice as much as it was before that date.

Under the new classification, which went into effect the first of the year, automobiles were changed from third to first class. This advanced the rate about 50 per cent. The system of billing was also changed. Automobiles had formerly been billed at a minimum weight of 4,000 pounds, but hereafter the minimum will be 7,000 for crated or boxed machines, or 8,000 pounds for uncrated machines. This again increased the rate, making the total of 100 per cent increase.

The Boston Dealers' Association took up the matter and after some discussion it was decided to let the customer pay the freight, so the following notice was posted at the stores of fifteen dealers:

"The terms for all automobiles being f. o. b. their respective factories, we, the undersigned, members of the Boston Automobile Dealers' Association, agree to sell cars at list prices plus the freight charges from factory to Boston."

This was signed by Harry Fosdick, Winton; A. E. Morrison, Peerless; Fred Randall, Stevens-Duryea and Clement; Reed-Underhill Co., Knox; E. A. Gilmore, Rambler; George Neth, Electric Vehicle Company; W. E. Eldridge, Pope lines; J. H. MacAlman, Locomobile; George H. Lowe, White; A. R. Bangs, Franklin; P. A. Williams, Ford; C. S. Henshaw, Thomas; Dowling & Maguire, Pierce; Roswell Drisko, Walter; Moore & Smith, Antocar.

### ANOTHER FOREIGN CAR

New York, March 6.—The first of the "V. & D." chassis, whose agency for this country has been taken by the Central Automobile Co., will be out of the custom house this week and placed in view at the company's garage at Broadway and Fifty-third street. It will be of 14-15 horsepower and sell for \$4,500. A 20-24 horsepower chassis will also be imported, whose price is \$5,600. These cars are built by Vlnot at Deuingand, at Puteaux, France.

The catalogue specifications follow: The motors are of the vertical type, jump spark,

all valves mechanically operated and interchangeable, centrifugal governor acting on drum throttle. The governor is so exactly adjusted there is no racing of the motor should the clutch be thrown out at any speed.

The cam shaft gear and distributing gears are enclosed in the center of the crank case, thereby eliminating all noise, being free from dust, etc., and also acting as splash feed for the crank case. Cooling is by tubular radiator, placed in front of the motor and by positive drum pump of large volume. The carburetor is of float feed type and can be regulated from the seat.

Control is by hand lever on steering column acting on drum throttle, by advancing and retarding the spark by a lever on the dash board and by accelerating of foot pedal, throwing into governor.

The clutch is leather faced, cone type, with ball thrust bearing. The transmission is of the sliding gear form, with four speeds ahead and one reverse, being direct drive on the high speed, all controlled by a single lever. There is a double chain drive. The cars have a foot brake, acting on the differential drum, and a hand lever brake of expansion type, acting on both rear wheels, these brakes being entirely enclosed.

The muffler which is placed on these machines won the first prize in the competition organized by the Automobile Club of France. The weight of the car is 1,650 pounds, length of wheel base, 100 1/2 inches; head, 54 1/2 inches. The wheels are all the same size.

#### RECENT INCORPORATIONS

Cleveland, O.—Automobile Garage & Repair Co., capital stock, \$25,000. Incorporators, Ralph Worthington, Henry T. Loomis, Albert L. Soper, Alexander C. Caskey, Joseph M. Bella.

La Porte, Ind.—Automobile Co. of La Porte, capital stock, \$8,000. Incorporators, William N. Rumley, John Wolf, W. J. Vogt, Axel Lindgren and Martin Weber.

San Jose, Cal.—Letcher Automobile Co., capital stock, \$25,000. Directors, Clarence H. Letcher, G. E. Letcher, L. D. Letcher, W. S. Corliss and F. E. Coykendall.

Detroit, Mich.—Reliance Automobile Mfg. Co., capital stock, \$150,000. Stockholders, D. O. Paige, Fred O. Paige, Hugh O'Connor, George C. Weatherbee, John O. White, W. H. Miller and others.

Chicago—Lake Shore Auto Station; capital stock, \$5,000. To rent and repair automobiles. Incorporators, Arthur W. McGowney, W. R. T. Ewen, Johann W. Waage.

Rochester, N. Y.—Gonesse Auto Car Co.; capital stock, \$10,000. To manufacture motors, etc. Incorporators, Edward A. Keenan, George W. Mason and Henry H. Kingston.

#### NEW N. A. A. M. DIRECTORS

The following changes have been made in the executive committee of the National Association of Automobile Manufacturers: Percy Owen, R. D. Chapin, Col. K. C. Pardee and Albert L. Pope will take the places of Alexander Winton, R. E. Olds, J. W. Packard and Col. A. A. Pope, respectively. J. Wesley Allison has resigned the third vice-presidency, and has been elected secretary. G. W. Bennett has been elected third vice-president. A. B. Tucker will be appointed resident representative of the association at the St. Louis exposition.

## A WONDERFUL GROWTH

### The Touring Club of France Is Now Fourteen Years Old and Has 84,500 Active Members

The Touring Club of France was organized January 26, 1890, and for a time occupied two small rooms as headquarters. By December 31 of that year the membership had reached 436, including seven women. The finances of the new organization were not very heavy and after the sum of \$4 had been placed in the reserve fund \$22.70 was left to begin the season.

The club had many prominent Parisians on its roll, and while its direct object was to make the club a pleasure society, the numerous manufacturers and dealers belonging to it began influencing the French government as much as possible to improve the roads. Within a few years the Touring club became an important factor in the French capital. In 1895 the 25,000 mark as to membership was almost reached, the exact number being 24,923, which, compared to the preceding year's membership, 7,647, showed a most astounding increase.

With this increase in members came a corresponding period of prosperity in the treasury, and from the paltry \$4 carried in the reserve fund in 1890 the amount increased until it reached \$48,497 last year, while the total income in 1903 was \$180,049. One of the finest residences in Paris, the Humbert hotel, was bought last year for \$80,000, and is now the home of the club.

The membership of the club up to December 31 of every year since its foundation was as follows: Four hundred and thirty-six members in 1890, 1,136 in 1891, 1,843 in 1892, 2,951 in 1893, 7,647 in 1894, 24,923 in 1895, 46,724 in 1896, 61,770 in 1897, 70,020 in 1898, 72,576 in 1899, 73,120 in 1900, 74,094 in 1901, 77,641 in 1902 and 84,504 in 1903.

Among the members of the club are many of the members of Europe's royal families, while the princes and dukes and barons are so numerous that it would require a booklet to name them. The names of almost all the leading automobile manufacturers of Europe are on the club's blue book.

While still a social organization, the club does a great deal of good for automobilism, and is quite as active in this respect as the Automobile Club of France, with the difference that it does not touch racing matters.

#### BUSY ON FAST CRAFT

Hartford, Conn., March 5.—The number of high speed motor boats to be owned about Hartford is certain to be large during the season to come and yachtsmen are making plans for the ownership of such craft. Daniel S. Morell, secretary of the Hartford Canoe Club, is having built at the yard of L. D. Hantington, of New Rochelle, a 30-foot flyer which will be equipped with a four-cylinder 20-horsepower motor. The boat will be very lightly constructed and will have but 5 feet beam. With propeller running, the draft will be 12 inches and the boat will float on much less water when not running at top speed. The terms of the contract provide that the craft must make 15 miles an hour over a measured course and both the engine and hull builders promise even better than this. It is anticipated, in fact, that 20 miles an hour will be made.

F. A. Law, mechanical engineer with the Electric Vehicle Co., who is in boat-owning

yachtsman, is consulting with Designer E. N. Way for a high speed boat of 40-foot measurement. This boat will have 5 feet beam and Law's present plan is to equip it with 40-horsepower. It is expected that work will be begun on Law's craft early in the present season.

G. A. Lowry, of East Boston, Inventor of machinery for scraping logs used in the Chicago stock yards, of cotton presses, and a variety of other well known devices, has produced a new propeller wheel by which it is expected greater speed will be attained than ever before with high speed motors. It has always been a theory that it was not practical to turn a propeller more than 600 to 700 revolutions a minute. Mr. Lowry has proceeded on the principle of a post-hole auger, and claims by his invention it is possible to turn over 1,500 or more revolutions with the water little if any disturbed and with every bit of effort counting in the speed. He has built a couple of propellers of this type and is testing them hitched to gas engines at his laboratory in East Boston.

#### NOTES OF EUROPEAN TRADE

The importation of automobiles into Dutch India is rapidly increasing and ought to present a good field for American cars. The value of the cars imported during 1902 was \$29,267, most of which came from France and Holland. According to the United States consular report there were also three American automobiles, which, however, came from Singapore. The roads in Java are fairly good and well adapted for motor car service.

An automobile factory of Nuremberg, Germany, has received an order for an automobile train from the Dutch government which will be of a novel pattern. While the driving power is supplied by an alcohol motor, each wheel has an electric motor, fed directly from the dynamo, so that the wheels are driven without mechanical complication. When empty this road train weighs 7 1/2 tons, and 10 tons when loaded. It can draw 20 tons without difficulty. The train will not average more than 6 miles per hour and must be able to be driven on the roughest road, as well as over soft grass and farming ground.

In the Portuguese colonies automobiles and motor bicycles are subject to a duty of \$132, and chassis are subject to a duty of \$78, while detached parts are not subject to duty.

On account of the increasing number of different styles of automobiles used in the British army, it has been decided to build a special automobile repair shop in Aldershot. The government is considering the advisability of establishing an imperial automobile factory.

It is claimed that a German manufacturer, established in Nuremberg, has made an automobile tire of leather which has proven superior to any kind of solid or pneumatic tires, and that a motor car fitted with such tires covered 16,120 miles without necessitating either repairs or replacement.

A Berlin newspaper says, after severe tests, which began last winter, under the direct supervision of the German emperor, the latter finding the results very satisfactory, ordered six heavy commercial cars, each costing about \$5,000, to be used instead of the four-horse wagons used heretofore. The service is between the castle in Berlin and the one in Potsdam, and takes only 2 hours, including the return trip, as against 7 hours with horse-drawn wagons.



## WAS SELDEN ANTEDATED?

**French Engineer Argues that Lenoir Was Years Ahead of American Yet Partially Admits the Selden Claims To be Strong—He Also Suggest that Rosenwald Patent May Affect Case**

Both the Selden and Lenoir patents have recently been much discussed, says Phillip Rey, an engineer, in l'Automobile, of Paris. The word "bluff" has been used repeatedly in connection with this subject and the dailies and weeklies have tried as much as possible, in discussing the two patents, to show that Lenoir had priority of invention in a car itself, as well as in the clutch device, etc. There remained to be established, however, in the matter of jurisdiction governing the patent inventions, whether the Selden patent, the age of which seems very extraordinary, were really still valid and if the documents cited lately were really against it according to the sense of American law.

As we wanted to know exactly how the matter stood, we consulted Lavoix & Moses, engineers and counselors of patents. Here is what Mr. Lavoix said: "You are speaking there of a 'bluff' prepared in a superior manner. The press has already published notices of previous inventions to the Selden patents and one has described the investigations made in Europe by the American syndicate which bought this famous patent, but nothing has been said of the extraordinary circumstances which are really unbelievable at first examination. How can a patent which was filed in 1879 be valid in 1904, that is, for 25 years, inasmuch as patents last only 15 years in the principal European countries and 17 years in the United States! One might think a special law had been brought in to prolong this patent, as a national reward.

Among those Americans well posted the famous Selden invention is thoroughly ignored. Applications for patents in America are put through a preliminary examination before the patent is granted. Until recent years the inventor had 2 years to answer the objections of the examiner. Generally the inventor did not profit by this length of time and even when there were two or three successive objections, the patent was allowed 2 or 3 years after the date it had been filed.

Concerning the Selden patent the answers to the objections were very likely not made until the extreme limit of the 2 years had been reached, but the inventor resorted to clever ways of procedure to obtain new facts and new objections concerning the patent, inasmuch as it was filed May 8, 1879, and the patent only granted November 5, 1895; that is, 16 years

and several months after having been filed. Inasmuch as the duration of American patents is 17 years and as this time is only taken into consideration from the moment the patent has been granted, it can be seen that the Selden patent, which was granted November 5, 1895, would have expired November 5, 1912. It has thus lasted 33 years 6 months. The American syndicate can thus still use the patent during 9 years. One must really recognize that the game was not badly played at all.

The second part in the matter, which consisted in getting up a syndicate or trust to which the different American makers adhered,

The Paris manufacturer, M. Jeanstaad, related to me that he personally assisted at the first trip of the Lenoir car, which was driven by Lenoir, so that the priority of Lenoir is well established. This is unhappily, however, not sufficient. The Lenoir patent, which is the only document that has been published, covers only the motor and does not describe the application of this motor to the automobile.

As to the Lenoir vehicle, as it has not been patented nor described in a printed publication, it is not opposable to an American patent. This fact is taken from section 4923 of the American law concerning patents, which section has for its title, "Patents are not null on account of previous foreign exploitation."

Something else must thus be found. Fortunately we are not embarrassed. The essential principles in the automobile vehicle are altering the direction of the movement of the car; and the clutch, for disengaging the motor and for starting. The speed change and the starting

are described in the numerous patents covering steam vehicles and filed between 1830 and 1878.

There remains to the credit of the Selden patents only the combination of these parts with an explosive motor. This combination has been described in all its details in the French Rosenwald patent, which is 2 years older than the Selden patent, inasmuch as it dates from February 3, 1877.

The motor cooling, through water circulation, which is mentioned in the Selden patent, is also to be found in the Rosenwald patent. The Selden patent can thus only be valid for the manner of construction, which it describes, and not for principles already known and already combined between them

in the application of these same principles to a practically operating motor car.

### THE KAISER'S NEW CAR

The German emperor has ordered an automobile similar to one of King Edward's. The body will be built in England and will be of the omnibus type. Behind the driver's seat is a structure with a glass front and back, and a roof is built over the seats, which accommodate six persons. The car will be lighted by electricity. The upholstery is crimson leather and the body will be painted in the same colors as the German imperial train, ivory white being the prevailing tint, with lines of dark blue and gold. The motor will be furnished by the Mercedes company.

The Electric Storage Battery Co., of Philadelphia, Pa., has contracted with the World's Fair Automobile Transit Co., of St. Louis, Mo., for 100 sets of forty-four cells each of the Exide battery. These batteries are to be used in the operation of the bus line which is to be in service during the fair.



REYNOLDS

A ROAD IN INTERIOR NEW ZEALAND. HOW ABOUT INTERIOR ILLINOIS?

with a view of imposing a license fee on any imported car in the United States, is certainly not inferior to the first, inasmuch as with such a combination no American engineer will try to have the patent declared void. Has the continent nothing to do but to bow? We do not believe it in any way.

Let us observe, however, that the Selden patent can have no loss of value, inasmuch as in America the patent, after having been allowed, is not subjected to an annual fee nor to exploitation, contrary to the methods used in most European countries. The patent can not be attacked except in demonstrating that the invention was not new in the sense of the American law when it was applied for.

In recent articles the French patent of Lenoir of 1860 for gas and hydro-carbon motors has been analyzed at length and letters from the former foreman and workmen of Lenoir have been produced. These establish the fact that the French inventor had built, as early as 1862, an automobile fitted with a motor of his design and possessing a clutch.

## PUTTING ON A FRONT

"PUTTING on a front" is the most common way to rivet attention, and in elegant as the phrase may be it is certainly expressive of the meaning implied. It may be used both literally or figuratively. It applies as well to the man who affects red vests and red neckties as to the man who throws out his chest in a telephone conversation.

It may not be just but it is true that things are generally judged by their fronts. The ordinary city house is the best evidence. Automobile builders do not go to the extreme that city house builders do in putting on a fine front even at the expense of everything else, but they are none the less anxious that the front end of the car is attractive to the same measure that the chassis is mechanically excellent.

People judge largely by first impressions and the first impression a person generally gets of an automobile is the appearance of its front. In strict seriousness the character of the front end of a car does more to determine its general appearance than does the character of its rear end, freak construction being excepted.

In the early days of the motor industry the makers of automobiles copied carriage styles outright. In fact, they so nearly duplicated carriage forms that it seemed to be their endeavor to make an automobile look as much like a horse and buggy without the horse as possible. Then came the reaction—the quick attempt to make automobiles distinctive vehicles. This attempt brought with it the motor bonnet.

Primarily it was not a part of the attempt. It was the result of placing the motor on the front end of the running gear, where it would not be covered by the body proper, but would need some separate covering. But automobile makers saw in the bonnet the means of ridding the automobile of the shaftless carriage appearance and grasped it, whether in their individual practice they placed the motor on the front, the rear or the middle of the running gear.

Those who had evolved the bonnet as a necessary part of a motor-front machine brought out a sloping curved affair with beveled sides. It at once became the vogue. It covered everything from one, two and four-cylinder motors to induction coils and boxes for monkey wrenches and spark plugs. Some makers took up the bonnet idea as a good one, but were unconventional enough to create styles of their own conception. It is needless to say that these styles varied from the very good to the very

bad. Steam machines suddenly had bonnets and then electrics had bonnets. Almost everything with four wheels and a motor had a bonnet of some sort.

The almost general use of a certain style of bonnet was brought to an end by two things—the natural desire of the American designer to create new things and by the Mercedes. When this German-made car appeared with the square bonnet there was a somewhat widespread abandonment of the sloping curved affair in favor of it and about the same time all sorts of adaptations of the article commonly known as box were brought out. Then came the new Mercedes bonnet with curved top and square base and another switch in tactics was noticeable.

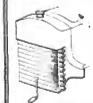
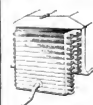
Its adoption was so common that makers in all countries recognized it as a sort of standard in bonnet style and announced that their cars were fitted with Mercedes style bonnets.

The latest development of the bonnet has been twofold—by the course of original design and by the course of reconstruction of the Mercedes bonnet. Both courses aim toward the same end—to be original.

In the former process many of the freaks have been weeded out, leaving several excellent bonnet designs which are at once peculiar to the machines they characterize and attractive in appearance. A few rather far fetched conceptions of what comprises a good looking front, of course, remain to prevent bonnet building from becoming too conventional.

In the course of the latter process almost every conceivable way has been taken to make Mercedes bonnets which will be like the original, yet different. In some cases the original bonnet has been improved; in others it has been caricatured, but in all its unmistakableness is plain. The result of all this effort toward individuality in bonnet making is partly shown by the border of this page, which constitutes sketches of twenty-four of the bonnets of 1904 American automobiles.

The motor bonnets of automobiles certainly form an interesting study; just as interesting, in fact, as that once formed by the evolution of the bicycle frame. The ending of that evolution was the standardization of a certain pattern of frame which made all bicycles look alike to the casual eye. Whether or not motor car bonnets will be so standardized is an open question, but it is probable that they will not as they are obviously creatures of design only and not subjects into the account of which must be taken structural strength and general fitness.



# GOSSIP OF THE METROPOLITAN GARAGES



Deliveries of the S. & M. Simplex cars will begin in May.

◆◆◆

"We are getting out the Ramblers in good shape," said George W. Bennett, who was in town last week attending the N. A. A. M. executive committee meeting, "having raised the daily output from six to eight cars."

◆◆◆

The first of the Pope-Hartford tonneaus has been on exhibition at the Pope Mfg. Co.'s down-town store for 10 days. Deliveries of the Pope-Tribune runabouts are expected to begin next Saturday. Colonel Pope is highly pleased with the popularity the new Toledos have won and says he challenges any foreign maker to show their superiority in workmanship, material and all around merit.

◆◆◆

Jefferson Seligman, the banker, who has probably owned more cars and tried out more makes than any individual owner in America, is the purchaser of the first Martini to be imported by Alexander Fischer. It was due to arrive last Saturday. Mr. Fischer has placed a Martini at the disposal of Secretary Butler, of the A. C. A., for a speed try out of the Virginia Beach course on Saturday or Sunday next.

◆◆◆

A. F. Meyers has opened a garage at 307 West Forty-fourth street, and is engaged in the importation of the Aries car and Aster motors. The cars have Aster motors, though Mr. Meyers sells the motors separately as well. At present importation is confined mainly to the 8-10 horsepower models at \$2,500, and the 12-14 horsepower cars at \$3,000. The cars are very catchy looking vehicles and are fitted with handsome natural butternut bodies. Mr. Meyers says he has had many inquiries for the Aster motors for boat equipment and hints at a big racing craft so fitted, of which something will be heard later.

◆◆◆

The "United States Agency Michelin Tire Co.," recently formed with a capital of \$50,000, and Norris M. Mason, former manager of the New York branch of the Franco-Americaine d'Automobile, as president, has just established one of the largest and most pretentious garages in the city. It occupies the entire lower story of a great brick and iron structure built on five city lots, from 132 to 140 West Twenty-seventh street. It has 10,000 square feet of floor space. Of this 7,000 square feet are given over to vehicle storage purposes. The rest of the space is devoted to the offices, a store room for Michelin tires and imported sundries and a completely equipped repair shop for vehicles. Mr. Mason lost the Moron Ag-

man that the piles of unpacked tubes and boxes represented \$14,000 worth of Michelin tires and that \$22,000 worth more were on the way. Mr. Mason will say nothing of any business to be conducted at present, beyond the tire, storage and repair lines, and that he will have nothing to say about any vehicle selling department until after his return from Paris, whither he sails next month. It is guessed, though, that M. Clement is the main backer of the enterprise, though Mr. Mason owns to a considerable number of American stockholders in the new enterprise.

◆◆◆

The boys are giving Percy Owen the "bam" and "come on!" following his adventure with a pseudo "Charley Dwyer," who wanted to buy a Winton for Fuller, the jockey, and incidentally put him next to a pool-room killing at New Orleans. Two men representing themselves as employees of Harry Payne Whitney tried to engage storage space for four cars. Before they had time to give him any "tips" he chased them off. They went down the street to the Mobile garage, but Owen promptly found two cops to arrest them, after Mr. Whitney's secretary had assured Percy that they were imposters. Despite the general public opinion that automobile dealers are "highway robbers" grown gray in the pursuit of crime, the huncos men have evidently sized up the New York bunch as "easy marks," for still other bunco attempt stories are afoot.

◆◆◆

Hollender & Tangeman have sold twelve of the forty-five Flats—not F. I. A. T. any more, please; too clumsy. You know—of the forty-five allotted them by the Turin factory. This means orders up to May. Hence Mr. Hollender's sudden sailing to Italy to secure a larger share of the output, and, by the way, he will endeavor to secure the 200-horsepower Fiat racing boat that is to compete at the Nice regatta this spring for the money match and open races expected next summer in those waters. Mola, an Italian crack, has been imported to drive a Fiat racer in the track, road and beach contests, and also in a time trial at Ormond or Virginia Beach. Among the recent buyers of Flats are: Charles A. Moore, of Manning, Maxwell & Moore; Dr. Lewis Morris, of the United States navy; Charles O. Gates, Jules J.

Vatabel, and Miss M. C. Bishop, daughter of Mrs. Heber Bishop.

◆◆◆

John D. Price, of Hazelton, Pa., has been added to the firm of Woolston & Brew, agents for the Thomas three-cylinder cars.

◆◆◆

The committee appointed to boom Newport, R. I., as a summer resort will ask William K. Vanderbilt, Jr., and Colonel John Jacob Astor to co-operate in establishing a sporting park with an automobile track as a feature. The automobile track was first suggested by Mr. Vanderbilt about 3 years ago, and Colonel Astor became interested in the project last summer. It is estimated that \$25,000 will be needed to establish the park and track.

◆◆◆

In response to the request by the New York Automobile Trade Club that its members furnish pictures for the adornment of the club's rooms in the Hotel Navarre, Alexander Fischer, importer of the Martinis, has contributed a cleverly conceived cartoon in water color, which perpetuates a galaxy of "gags," whose point the local trade well understands. It is entitled "Running the Gantlet" and gives a burlesque view of the Thirty-eighth street "Automobile Row," looking down the street from Broadway. Possible purchasers in the person of a portly gentleman and elegantly attired lady stand in the center of the street.

"The only stand is Forty-third street, mamma," cries the small boy.

"Forty-fifth street is where you get the real ones" urges a scout.

"I must have a Decauville," screams a man running pell mell down the street, where E. S. Partridge stands in a doorway with a motor boat under his arm, crying out, "Urry boy before they are gone, hold chap." The tin pan, you know.

"We have only a few Richards left. If you want one, come quick. Nothing like them," bellows Gallaher.

Proctor Smith stands at the corner with the Hainsworth cup under his arm pointing out the Smith & Nabley garage around the corner.

On the other side of the street F. A. La Roche sticks his head out of an upper window and shouts: "The Darracq is the best on earth. Look it up."

At the end of the row a bunch of newspaper men stand. "Let's go up on the next block," suggests one of them. "Sure," is the answering chorus at the idea of visiting Soubrette Row.

In a vignette in the corner a picture represents Fischer raking in the thickly scattered "long green." A cocktail glass labeled "Martini" is at hand and in the air a motor boat.



# NEAR THE HEART OF NEW ENGLAND MOTORING

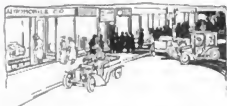
The Automobile Club of Bridgeport, Conn., has a membership of seventy and many of its members are owners of high priced machines. The club is in a thriving condition and is one of the most influential motoring organizations of New England. The officers of the club are: president, Jesse B. Cornwell; vice-president, W. S. Teel, Jr.; secretary, Dr. D. R. Beebe; treasurer, Frank T. Staples; board of governors, Frank Miller, David T. Read, Bernard Stetson and Frank I. Hitchcock.

Asa Goddard, president of the Worcester, Mass. Automobile Club, is an enthusiastic automobilist and has the distinction of being the first to use an automobile in this city, this being one of the first manufactured by the Olds Motor Works. He is a strong advocate of good roads, road making being his business. The Massachusetts State Automobile Association lately made him chairman of the good roads committee. B. A. Cones has lately been elected vice-president of the Worcester Club.

For its population, Marlboro, Mass., is one of the most enthusiastic towns in the state. The Marlboro Automobile Club is a very harmonious and pushing association. It now has a membership of forty-seven with a large increase in sight. The president of the club is Dr. H. H. Hott, an exceedingly popular man, whom his fellow citizens honored in the past by placing in the mayoralty chair. The other officers of the club are Dr. J. S. Harriman, vice-president, and J. F. Otterson, secretary and treasurer.

There are twenty-five members in the Automobile Club of Fitchburg, Mass. An increase of ten more members is expected this spring. The officers of the club are: President, C. F. Putnam; vice-president, Dr. A. H. Pierce; secretary, L. H. Greenwood; treasurer, G. P. Grant, Jr., and directors, W. H. Chase, H. R. Smith and Dr. A. E. Mosseman. The roads leading from Fitchburg to the east and south are from fair to good and to the north and west fair to bad.

H. K. Reid, of Bridgeport, Conn., until recently with the Locomobile Co. of America, has taken charge of the Auto-Headquarters at 69 State street, Bridgeport. The station includes ample room for storage and a com-



plete repair shop outfit. Special facilities for machine work are being installed.

G. B. Parsons, proprietor of the Bristol, Conn., Auto Station, is the local agent for the Orient hackboard, and also maintains an extensive storage station and repair shop.

At Derby, Conn., L. A. Biever has a general agency and repair shop business at 271 Main street. His trade seems to be very active.

The Oldsmobile is handled at Meriden, Conn., by A. W. Bowe & Son. This firm is also about to open a first-class repair shop. E. H. Towle Co., of which G. H. Towle is president and G. E. Towle secretary, is the Meriden agent for the Autocar and the Franklin. The company is about to erect a commodious three-story garage. The depth of the building will be 176 feet and the width 66 feet. Its facilities will include a charging outfit for electric cars.

At Waterbury, Conn., L. L. White has the agency for the Stevens-Duryea and conducts a repair shop. W. B. Colter has the Waterbury agency for the Michigan, while John Younman is engaged in the business of assembling motor cycle parts.

J. H. Star, 18 White street, Danbury, Conn., is agent for the Rambler. W. & J. Cook are about to open a repair shop at Torrington, Conn. At Ansonia, Conn., Curtis & Tomlinson are agents for the Ford and conduct a general repair shop.

The Elm City Automobile Garage is the principal establishment of its kind at New Haven, Conn., and is equipped to take care of a large number of machines, both in the way of storage and of repair. The Holcomb Co., 195 tloffee street, New Haven, Conn., has the Winton agency, while N. B. Whitfield, 67 Broadway, handles the Ford. The Campbell Cycle & Motor Co. has the agency for the Ram-

bler. The New Haven trade is booming and sales in large touring cars are expected to be numerous, several big Locomobiles having already been sold. There is also a good sale in motor cycles. J. E. Cox & Sons, Inc., N. Boyce and D. H. Duell having established agencies in the two wheelers.

H. A. Robinson, 671 Main street, Worcester, Mass., anticipates a large sale in this section of New England, and estimates that over 200 cars will be sold in Worcester this season. Mr. Robinson has the agency for the Winton, Locomobile, Autocar, Cadillac and the Waverley and Columbia electrics. His garage will accommodate forty machines and is supplemented by an extensive repair department and charging outfit.

The Central Automobile Station, 43 Foster street, with A. K. Miller as manager, has the Worcester agency for the Pierce, Olds and White. The extensive repair shop is under the charge of F. A. Lockwood, who has had European experience in the de Dion and Humber factories.

The Harrington Auto Station at Worcester is undergoing extensive alterations. There will be two floors 120 by 70 feet. The mechanical department will be in charge of A. Mackay and aside from the regular repair facilities will include paint, blacksmith and wood working rooms. Mr. Harrington sells the Knox and Stevens-Duryea.

The Worcester Automobile Co., 86 Exchange street, J. A. Dean, manager, has taken the agency for the Hloward and has established a repair shop and storage station.

At Marlboro, Mass., Frank Billings has the agency for the Knox and anticipates a lively season, as last month he sold and delivered seven cars. D. E. Willard sells the Ford here and conducts a general repair shop.

At South Framingham, Mass., C. F. Whyte conducts a general repair shop and storage station. It is well equipped.

At Fitchburg, Mass., the Iver-Johnson Co. will again handle the Cadillac for this section, while C. L. Lewis conducts a large repair shop and builds automobiles to order.

At Spencer, Mass., J. E. Goddard conducts a storage station and repair shop.



TORING BY AUTOMOBILE IN WOODED WESTERN PENNSYLVANIA



MOTORING



INCIDENTS OF A TRIP MADE BY T. R. HARTLEY, OF PITTSBURGH

## THE READERS' CLEARING HOUSE

### TWO-CYCLE MOTOR

Pittsburg, Pa.—Editor *MOTOR AGE*—I am building a two-cycle motor for a vehicle. Which is preferable, a double-opposed cylinder or a two-cylinder vertical pattern? Should the two cylinders of the motor, if of the opposed pattern, be in line, with a single crank case, or should they be offset with a partition in the crank case? What power would be developed by a 4½ by 5-inch double opposed cylinder motor? What stroke is most suitable in combination with 4½-inch bore? What should be the size of the ports and what should be the rim weight of the fly wheel?—R. E. TWYFORD.

There is much difference of opinion concerning the relative advantages of vertical and horizontal two-cylinder motors. This subject has been often discussed and was recently summarized by Charles E. Duryea in an article in *MOTOR AGE* of the issue of December 10, 1903. There is no need of a partition in the crank case of the double opposed cylinder two-cycle motor. The motor would develop about 10-horsepower at 600 revolutions per minute. The stroke of a two-cycle engine may be anything from the same as the diameter to one and one-fourth times the diameter or bore. The inlet port should have a width in direction of piston travel of ¾-inch, and a total length of 4½ inches, measured circumferentially. The exhaust port would have a width of 11-16-inch with same width. The rim weight of the fly wheel should be about 150 pounds for a diameter of 20 inches.

### VALVE SPRINGS

Montrose, Pa.—Editor *MOTOR AGE*—Please inform me through the Readers' Clearing House if there is any formula for determining the pressure that must be exerted by exhaust valve springs. This depends, of course, upon the speed of the engine, the requirement being that the spring shall have sufficient tension to close the valve within, say, one-fifth or one-sixth of the stroke when the engine is running at its maximum speed. Any information upon this subject of valve springs will be gladly received.—H. W. B.

The subject of valve springs is an extensive one, viewed from a theoretical standpoint, and the computations involved are somewhat complex. There is also some doubt that after valve springs have been made according to the results of computations they will be practically correct. Experimenting alone can give absolutely satisfactory results. The subject is summarized fairly well in the chapter on Valve Openings and Valves, in Stoddard's Gas Engine Design, published by Parker & Burton, of Detroit, Mich., and obtainable in paper cover for 25 cents.

### THREE CYLINDERS

Chicago—Editor *MOTOR AGE*—It is my intention to construct a multiple-cylinder motor for automobile use, and I would be pleased to have from you an opinion as to the relative merits of a three-cylinder motor as compared with two and four-cylinder motors. Would you consider a three-cylinder motor to be more evenly balanced and would the gasoline consumption per horsepower developed be less in a three than in a four-cylinder motor? I wish also a

candid opinion concerning the relative merits of air and water-cooled motors. Has there yet been produced a satisfactory air-cooled motor for automobile work?—C. J. B.

The three-cylinder motor problem was exhaustively discussed in *MOTOR AGE* of the issue of December 10, 1903. It is probable that the three-cylinder motor would use less fuel per horsepower than the four-cylinder motor. Air-cooled motors, when properly made, have given good service, especially when used in connection with a fan to create a forced draft regardless of whether or not the vehicle is moving. Air-cooled motors have been considered practical in sizes up to 3½-inch bore, but recently several makers have brought out larger models, and their performance the coming summer will be watched with considerable interest.

### HORSEPOWER FORMULA

Boston—Editor *MOTOR AGE*—Will you kindly publish in the Readers' Clearing House a good formula for motor horsepower for four-cylinder motors, giving the compression, number of revolutions, and size of cylinders? Should the compression be calculated at the top of the stroke or at the moment of explosion? Also kindly give a formula for determining fly wheel weight.—E. O. S.

A good formula for indicated horsepower is—

$$I. H. P. = \frac{P \times L \times A \times N}{33,000}$$

in which P is the mean effective pressure; L, the length of the stroke in feet; A, the area of the piston in square inches, and N the number of impulses or explosions per minute. For four cylinders the results obtained by this formula would be multiplied by four. The mean effective pressure may be determined from the maximum gauge pressure of compression by Grover's formula—

$$M. E. P. = 2C - .01C^2$$

in which C is the gauge pressure. It is wise, however, to deduct about 10 per cent from the M. E. P. thus obtained, to allow for losses.

Formulas for determining fly wheel weight are given elsewhere on this page.

### MOTOR PROPORTIONS

Chester, Ill.—Editor *MOTOR AGE*—Will you kindly give the following dimensions for a four-cycle, four-cylinder, air-cooled motor of 3½-inch bore and 4-inch stroke, the cylinders of which work in pairs and the compression space of which is one-fourth of the stroke—the diameter and weight of the fly wheel; the diameter of the crank shaft; the depth, thickness and distance apart of the radiating ribs on the cylinder? In this motor it is necessary to have three bearings for the crank shaft, the crank case being 26 inches long! What is the formula for determining the weight of fly wheels for multiple-cylinder motors?—A. CHENEY.

The fly wheel may be 20 inches in diameter and of 90 pounds weight. The crank shaft should be 1¼ inches in diameter. The radiating ribs should be about ¼-inch deep, about ¾-inch apart and as thin as they can be cast, being tapering in cross section. It is not absolutely necessary to have three bearings for the crank shaft but it is extremely inadvisable to do so. There are several formulas for determining fly wheel weights, but the re-

sults obtained may not always be practically applicable. Generally fly wheel weight is determined by practice. One formula is—

$$W = \frac{153,000 H. P. \times a}{I P N^2}$$

in which H. P. is the indicated horsepower; a, the maximum number of strokes between impulses; D, the mean diameter of the fly wheel rim; n, the variation in the speed of rotation, taken as a fraction and in this case probably 3, and N is the number of revolutions per minute. A simpler formula, and one which serves practically as well is—

$$W = \left( \frac{M. P. \times S \times A}{D} \right)$$

in which M. P. is the mean pressure of compression; S, the stroke; A, the area of the piston, and D the diameter of the fly wheel. In such calculations only the weight of the rim is considered, it being common practice to assume that if the rim is sufficiently heavy to make the engine run sufficiently steady the weight of the spokes and hubs will but add slightly to this effect.

### STARTING COLD MOTOR

Toledo, O.—Editor *MOTOR AGE*—I have trouble in getting an explosion in the motor of my car after it has stood out in the cold for any length of time. It seems to be affected at a temperature of 45 degrees or under.—S. B.

The trouble probably lies in not being able to vaporize sufficient gasoline with the cold air drawn into the carburetor. By holding something over the open end of the air inlet to the carburetor to partly or wholly close it motors are often started in cold weather.

### RELATIVE FLY WHEELS

Columbus, O.—Editor *MOTOR AGE*—If a four-cycle, single-cylinder motor of a given size requires a fly wheel of a certain weight, what weight of fly wheel is necessary for a four-cylinder motor of the same cylinder size and speed giving four times the power, with two impulses each revolution?—A. L. JOHNSTON.

The fly wheel would be about 20 per cent heavier for the four-cylinder motor.

### AIR-COOLED MOTOR

Bradwell, Pa.—Editor *MOTOR AGE*—In *MOTOR AGE* of No. 12 of Vol. 3, is a description of a small two-stroke motor. I wish to know how large such a motor can be made. Can such a motor be made up to as high as 6 or 8 horsepower? What concern makes this engine?—J. M.

The motor being air-cooled is practically limited to 3½-inch bore, unless provided with something more than the ordinary radiating ribs to assist cooling. Thus its power would be limited to about 4½ horsepower. *MOTOR AGE* does not know of any concern which makes the motor described for the market.

### WATER CIRCULATION

Duluth, Minn.—Editor *MOTOR AGE*—I have had more or less trouble on account of my engine becoming heated. I imagine that perhaps the water circulating system is not connected correctly. What is the correct method of connecting a system for a double-cylinder opposed motor, there being a tank, radiator and pump?—A. R.

One of the common methods of connection is that whereby the water travels from the tank to the pump; from the pump to the lower ports in the cylinder water jackets; from the upper ports in the water jackets to the radiator and back to the tank.

# MOTOR BICYCLE ILLS AND A FEW REMEDIES

Under the inspiration of President Burley R. Ayers and Secretary Ira H. Whipple, the recently organized Chicago Motor Cycle Club holds weekly discussions on every phase of the motor bicycle and motor bicycling. The meeting last Wednesday brought out a general talk on fuel, plugs, batteries, etc., which, condensed, follows:

**GASOLINE OBTAINABLE**—"Stove gasoline" has been the obtainable fuel, and it varies from 62 degrees to 72. No trouble has been experienced that is traceable to quality of gasoline. Not that such trouble may not be traceable to the gasoline, but it has not been looked for there. It was agreed that the function of the captain in laying out runs, was to ascertain the gasoline supply en route and encourage the purchase of good fuel; for those now having it never thought of quality, as gasoline is simply gasoline. Many theories were discussed, showing a leaning to 72 test as being best for the plugs and machine generally.

**PICRIC ACID AND ITS USE**—One member had used it in his automobile last summer with good result as to increased power. He figured it drove his machine 15 per cent better, but the gasoline would cost twice as much when treated with the acid. He did not think it practicable for the road, although a fine thing for races. He experienced no harm to his valves, the only evidence of use being a discoloration. This was the experience of Wright Elsom, of Oak Park, Ill.

**SPARK PLUGS**—G. W. Hunter, of Hammond, Ind., stated he had experienced trouble from plugs in high speed motor cycle engines. The club thus engendered expanded the plugs and loosened them and the vibration did the rest. He had, however, received a new plug that was calculated to overcome this liability and from trial he had given it was an improvement. There was divided opinion as to the merits of mica and porcelain. One would loosen and short circuit, while the other would break. One member had trouble through the porcelain



breaking and a piece, getting into the valve, broke it. They both seemed to have evils too numerous to mention.

**BATTERIES**—Some batteries tested high amperage but died quickly in use. The most reliable test in experience was those holding to 18 or 15 amperes with 1½ volts. Batteries were easily obtained but they were the standard 2½-inch of the usual Columbia type, this being the kind carried by the telephone company, whose outlying stations were handy depots for such. Difficulty had been experienced, though, because many machines were fitted to carry smaller batteries, and hence some members had to tow home, unable to use the obtainable cells. This year the members were refitting their cell boxes to carry the standard size. The automobiles greatly aided this standardization of cells, having practically taken to the 2½-inch size. A discussion as to life of a battery of three 2½-inch dry cells showed variation of data, for some engines ran slow and some high; but it was thought good practice in average experience to get 600 to 800 miles. Some had found economy in adjusting the circuit breaker and cam. One member cut down the breaker one-third and got same power with longer life. Some had experienced resumption of life in a battery that was exhausted on the road by punching holes in the cell and pouring in water.

**DAMAGERS**—There had been no damage experience—that is, suits for loss.

**LAMPS**—No to be invented on the motor bicycle. It was the



lamp has hither-to that would stay cycle. It was the

universal experience that lamps fitted to the forkside were absolutely dangerous, without exception, and riders of any experience at all would not think of putting them there.

**BROKEN FRONT FORKS**—There had been no experience of this kind. All machines had kept intact. Mr. Bendix of New York reported that there had been some experience down there, confined to no particular machine, and that riders there had been looking favorably on the spring fork which seemed to promise immunity, while others favored the truss fork. The Schmitz spring axle was talked about, but it had not seemed to be other than an unworkable theory so far around Chicago. Such an axle would be obtained and shown at the next meeting. Its object was to secure springiness to solid forks and save shock and crystallization of fork heads.

**SIDE SLIP**—No advantage was seen in corrugated tires. The automobilists were at sea on this very point and it was beyond the experience of the members.

**BELT TROUBLES**—Burning of the belt by a racing engine had been freely experienced. One member had a fall and his machine, lying on its side with the coaster brake set, gave the engine a fine chance to race. It was a rawhide belt and the fibers were burned by the friction so they separated. No record was made of flat belts so burning except in one case where it was scorched some. Leather covered pulleys for flat belts were regarded as preventive; and several members who had used such during the past season reported favorably thereon, saying they could ride with a belt less tight. Another experience was had in the operators of Kenosha using sand with rawhide belts, thus accomplishing the destruction of the belts. They used the sand to prevent slipping. But one member favored the chain—Mr. Hunter, of Hammond. As to wearing of belts, one member reported 500 miles without the slightest evidence of wear. This was with flat belt and leather covered pulley.

## GORDON BENNETT PREPARATIONS



According to Burgomaster von Marx, of Homburg, if it had not been for the direct interference of Emperor William, it is possible the Gordon Bennett race would not be run in Germany this year. All the ministers hesitated in giving permission for the event, as they were afraid of the popular feeling, which was rather against holding an automobile race in Germany.

The mayor stated that the administration and the people of Homburg are working hard making necessary preparations, but suggested that a referendum be held by every automobile club which intends to send delegations to the race, so that it might be possible to determine when and how many club members will arrive. Otherwise there may not be found sufficient accommodations. The burgomaster recognized that the prices established by the hotelkeepers' trust are high, but stated that prices were always high in Homburg and other bathing resorts, because these localities have their regular visitors and are generally crowded.

There are about twenty first class hotels in Homburg and a large number of smaller ones.

all of which are anxious to receive will be moderate hotels and private residences. Homburg has a population of about 10,000 inhabitants.

Work is progressing along the course. Many stretches are yet to be rendered more rideable and in some instances less dangerous. "The general impression is that the road is pretty good, but pretty dangerous," was the mayor's comment, which gave the impression that the road must be more than "pretty dangerous," because the remark was made in such a serious way. It has not yet been officially decided how many neutralizations there will be, but the mayor thinks ten will be the minimum.

The emperor has again given specific instructions that the entire road be guarded, in a most rigorous manner, and it has been decided that the garrisons of Usingen, Wehrheim, Ober-Ursel, Homburg, Cronberg, Limburg and Koenigsstein would guard part of the road.

Besides the road upon which the start will be made, there are three leading to Saarlouis. Contrary to recent rumors, a number of grand

stands with a capacity of many thousand people, will be erected in Saarburg. A special stand for the Kaiser will be made, which will contain parlors, dining room, smoker, etc. A stand exclusively reserved for people who wish to reserve seats will be made near the imperial stand. A great public stand will also be constructed. Restaurants, bars and lunch counters will be found within the stands. The admission to the public stand will be \$5; reserved boxes for six persons will cost \$50.

Baron Pierre de Caters, Hautvast, Angieres, Jenatz, and a few other prospective aspirants for the cup, went over the entire road, including the new stretches, and reported that there were forty-seven turns, but that all told, the road was better than that in Ireland. At Allendorf there is a turn of 70 degrees; in leaving Ech there is a stretch of half a mile, which gradually reaches a 15 per cent grading. According to these drivers, not over 25 miles of the road out of the 82 miles, which is the distance of the circuit, are straight and level, and these 25 miles consist of little stretches, not one of which is longer than 3 miles.



# AUTOMOBILE

## BIG, FAST AND LIGHT

Clinton, Conn., March 7—What is undoubtedly to be one of the fastest crafts to be built in eastern waters this spring is now in process of building at the yard of Wyckoff brothers for Captain John J. Phelps, who has twice circumnavigated the globe in his schooner-yacht *Brunhilde*, and who is fleet captain of the *Sachem's Head* Yacht Club. Designed by C. B. Wyckoff, 43 feet over all, 41 feet on the water line and but 4 feet 6 inches beam on the water line, though possessed of 6 feet greatest beam, it is expected that this craft will be one of the fastest yet put up of her length. The hull will draw but 6 inches of water.

Into a well drawn hull, conceived on torpedo lines, is to be installed a 65-horsepower six-cylinder Hasbrouck motor, the product of the Hasbrouck Motor Co., of West Mystic. Far lighter than the ordinary marine engine, yet more stable than an automobile engine, this motor will be of skeleton construction and will weigh 1,200 pounds. She will realize her full power at 600 revolutions. The weight of the entire craft, engine installed, though planked with Honduras mahogany, will be but 2,300 pounds.

The hull will be divided into two cockpits and the motor will be placed in the forward compartment, so that the steering and management of the motor will be unobstructed by the presence of others than the crew. Seating accommodations for twelve passengers have been provided in the long after compartment. The boat is more solidly built than the boats which are being built for speed purposes, because Captain Phelps needed a craft in which he could come and go from his Thimble Island summer home. It was for this reason that her guaranteed speed was cut down to 20 miles an hour, over a measured course, but her designer and engine builder are both confident that she will make better than this rate of speed.

## MOTOR BOATS FOR THE "400"

Some of the members of New York's smart set are taking kindly to motor boats. An eastern maker is turning out three boats to run from 20 miles an hour upward. One is for W. K. Vanderbilt, Jr. The length on the water line is to be 35 feet and 40 feet over all. It will be fitted with a Mors engine of 60-horsepower. She is double planked of Alaska cedar, and all frames are steam bent, while the turtleback deck and trimmings will be of mahogany.

The second boat is for W. Gould Brooks and is 65 feet over all and 7 feet beam, with 3 feet extreme draught, including the propper.

She will be installed with a French automobile engine of 200-horsepower and will develop 20 miles an hour. Her planking is double, and the torpedo turtleback deck forward is of mahogany. The sleeping accommodations for the engineer are forward.

James E. Martin's boat will be 35 feet on the water line, with 6 feet beam. The engine will be a 35-horsepower Smith & Mabley. This boat is to make close to 20 miles an hour.

Another designer is building for J. H. Fingler a 35-footer. The hull is being built of Mexican mahogany and oak. There is to be a double cockpit with the motor and helmsman



in the forward one and seats for six people in the after one. The motor will be of the four-cylinder pattern. The ignition current is obtained from a constant current dynamo, which permits of starting the motor without the use of batteries.

## RATING AN AUTOMOBILE BOAT

At the last meeting of the American Power Boat Association it was decided that an automobile boat should be considered one whose rating exceeds ten times the square root of its load water line length. In measuring, it was decided that the midship section should be considered the actual greatest transverse immersed area. Other elements for measurement will be the same as provided for boats of all types in the association rules. The classification for automobile boats was decided to be all below 50 feet rating, between 50 and 100 feet and over 100 feet.

Arrangements were made so that owners of power boats may have their craft officially tested over the measured mile which has been laid out in Manhasset bay. The secretary of the association will issue a certificate of the same. Any owner desiring to have his boat timed will be required to notify the secretary of the American Power Boat Association at least a week in advance. The days set apart for these speed trials are the fourth Saturdays in the months of May, June, July, August and September. The measurement fee will be \$10. The timing will be done under the supervision of a committee to be appointed soon.

## MOTOR BOAT NOTES

Newport, R. I., is to hold a motor boat exhibition and a series of races this summer.

The builders of a 60-foot boat, soon to be launched on the Harlem river, New York, figure on a speed of 35 miles an hour.

Hollander & Tungenman are to furnish R. P. Hoagland with a motor boat which will be fitted with a 150-horsepower Fiat motor. Kerosene will be used for fuel instead of gasoline.

A race from Albany, N. Y., to New York city is being talked of by the racing board of the A. A. A., and Chairman Parington has set about to make rules and boom the affair.

The demand for motor boats and marine motors is exceptionally strong at present. This demand is credited to the boom given the sport by the press through the advent of the automobile boat. Most of the eastern and western makers are hard pressed to turn out orders in time for early launching. There has never been so many home-made boats on the ways as at present, which accounts for the demand for motors.

# BOATING

## WHO WILL CONTROL RACING?

New York, March 7—Who will control motor boat racing in America?

There is an unsettled condition of affairs now and a dispute has arisen as to what organization is authorized to make the entries for the British international motor boat trophy, the Harmsworth cup. A member of a yachting club of standing has been quoted as saying that one of its members proposes to make a direct entry for the race on the ground that any recognized yachting club may make an entry.

Both the American Automobile Association and the American Power Boat Association have plans for the control of racing. A member of the new racing board of the former fired the first shot when he said that American entries for the Harmsworth cup could be made only through an automobile organization.

J. H. McIntosh, an officer of the power boat association, retaliated last evening by denying the statement of the A. A. A. racing board member. Mr. McIntosh said that a few weeks ago, while he was secretary of the American Power Boat Association, he wrote Linton Hope, secretary of the Marine Motor Association of England, in charge of the international race, asking if entries would be accepted from the American Power Boat Association. Mr. Hope cabled his reply and confirmed it by a letter, saying that members of the American Power Boat Association were eligible and suggested that they send an entry.

Chairman Parington, of the A. A. A. racing board, had this to say on the situation: "The committee of three appointed by President Whipple to consider this matter is a very conservative one and will approach the subject in a moderate manner. The committee, consisting of Peter Cooper Hewitt, Louis R. Adams and myself, will meet a similar committee from the American Power Boat Association, with a view to arriving at a result satisfactory to all those interested in the sport. Our committee will also meet representative owners and builders of fast boats and from them learn their ideas as to what is needed in controlling the sport."

"I am free to say that we have no desire to antagonize the American Power Boat Association and enter upon its preserves. Originally I had in view that we should take over this matter wholly, but I think the present plan will produce a better result. Our technical committee of two, which I have appointed as an advisory board to our committee, consists of H. L. Towle, a motor expert, and Lieutenant Hall of the United States navy, who is an expert on hull construction. Naturally enough we will be guided largely by their views as to the practicability of the American Power Boat Association rules for our purposes."

"I think the outcome of the whole matter will be that we will affiliate with the latter in this way—that we will adopt its amended rules, hold races of our own—such as closed club events and long distance events open only to fast boats—leaving to the American Power Association all control of all other events."

Even this plan, if adopted, would shut out the unattached motor boat individual and leave more or less leeway for dissatisfaction.





great advantage. The electric motor is the only motor which can do it simply and efficiently.

Then, the control of the electric is so simple that when placed in the hands of comparatively ignorant drivers the electric motor suffers less than its rivals. Our ideal power system must be proof against ordinary damage in ordinary service by ordinary drivers. The absence of all change gears, throttle and igniter levers, feed pump handles and the like are strong points in its favor. Just as the motorman on an electric car has simply to turn on the power, so the operator of an electric vehicle has only one lever to work beside his steering gear and brake. Just turn on the power, as it were, and watch the road. It is these interesting features of simplicity that have given the electric its lead in the commercial field and bid fair to enable it very closely to approximate ideal conditions. Its radius of action must of necessity be limited as compared to that of a prime mover. That radius is steadily increasing, however, and now easily meets the requirements of municipal transportation service. Wagons in use by some of the largest express companies of the country leave the stable in the morning and do not come back until night, attaining in the meantime a mile and far in excess of what the horse can accomplish.

I very much doubt if the average man in this busy world realizes to how great an extent the electric automobile has quietly crept into our midst and as quietly proceeded to do the work called for.

Several hundred are in use in New York city alone for the transportation of passengers. Several hundred more are in use hauling merchandise for express companies, wholesale and retail houses of all kinds, brewers, general truckmen, hospitals, police departments, fire departments, electric light and telephone companies. One of the largest electric light companies in this country now uses electric automobiles for almost all of its service from the hauling of heavy machinery and cables of 5 and 6 ton weight to the light runabout service of its inspectors and superintendents. The satisfaction given can best be measured by the fact that their equipment is constantly increasing. Here sentiment has no place—dollars and cents again settle the question.

Then there is the doctor. He must have a vehicle ready to start off at a moment's notice without any question. It must be clean and require no attention likely to soil his clothes or hands, and he must be able to leave it out cold nights without any misgivings. Hundreds of physicians are now finding out what a great comfort for their electric machines are. They can cover twice the distance they formerly could in a morning of calls and that without the expense of a driver, an indirect but very material return to the credit side of the account that is usually overlooked. My own family physician has become so addicted to his machine that for any reason it is not available for a day he hires another automobile at so many gold dollars an hour in preference to using a horse.

The street superintendent, the fire chief and the electric light inspector all find that their quiet, ever ready, simple electric meets their requirements as they had not supposed an automobile could.

The touring field has been invaded lately as noted before. No difficulty whatever has been experienced in traveling from Boston to New York and getting charging current along the way. This must not appeal to the mile-a-minute man as ideal touring, but to the average man who wants to go comfortably and take his ease it is an attractive proposition. Sixty to 75 miles in a forenoon or an afternoon is about as far as most people care to ride without stopping a few hours to recuperate. Just as soon as the public demand such cars it will fill. It is forthrightly stated that the public knows it's available it is beginning to call for it. I know of one large electric touring car being built today along lines closely following the successful construction of the gasoline touring car. To all outward appearances it will be a standard gasoline car. It will, however, be free from noise, vibration and odor. It will be a

veritable white ghost de luxe and its owner ought to have an unlimited amount of pleasure in using it. There will be more and more of these cars built and I venture to predict that the average observer will become as callous to them before long as he always does towards everything novel.

A list of the applications of electricity to the automobile would be incomplete without reference to what have come to be known as "combination systems."

Here in general we find a small portable central station including prime mover, dynamo, motors and sometimes the storage battery. The presence or absence of the storage battery divides these systems into two distinct classes. Where the storage battery is used it would seem as if little had been gained, as the prime object of the use of the engine and dynamo would naturally be supposed to be the elimination of the storage battery for long haul work. When the storage battery is not used the dynamo and electric motor become simply a flexible transmission system eliminating the change gear systems in use on the straight gasoline car. As a transmission system, pure and simple, the electric cannot be more useful and its very simplicity of control may yet lead to its use on a large scale. So far, however, very little practical use has been made of the system here or abroad. The Fischer system here and the Lohner-Parsche in Europe are the only ones ever put out in real practice. The efficiency is lost as a transmission system, not over 50 per cent of the engine power being available at the rim of the wheel on extreme overloads. There is one field, however, where the combination system fits in remarkably—four motor drive for long haul work. The engine and dynamo give a storage battery of practically unlimited radius of action and the electric motor as before noted makes an ideal form of four-motor drive.

Another form of electric propulsion being used abroad quite a little is known as the trackless trolley where an electric automobile minus the storage battery takes its power from a pair of overhead wires. It is rather surprising what flexibility of travel such a machine possesses. It is not confined to a path immediately below the wires, but can wander quite a ways each side and get along through traffic quite readily. As a means of roadless trolley lines or on locations where traffic will not at once bear the expense of track installation this system offers a ready solution to the transportation problems. We are sure to see it used quite a good deal in the future.

Just lately another system has been brought to the front and the first equipment is now being made. It is primarily an engine and motor for travelling over common roads and hauling heavy merchandise long distances. It consists of a forward or pilot wagon carrying a gasoline engine of large power and a dynamo, and of several trailers, each equipped with a pair of electric motors. The power is transmitted from the forward wagon and being controlled from the cab, as it were, it is comparatively cheap to construct, ought to be cheap to maintain and should give good results in many instances. The actual horsepower required at the rim of the wheel would be much in excess of that required on steel wheels, but fuel is one of the smallest items in transportation. Interest on investment and skidding fuel largely exceed it generally.

The most frequent question of the intending purchaser is: What will it cost me to run the machine? The answer is: It is hard to say. It is a deal of misunderstanding. Hastily drawn conclusions or conclusions drawn from incomplete data are too often applied to the general question. This is a dangerous proceeding regarding any new thing and the automobile is no exception.

It should very likely be in the hands of a master of operation in detail and show how it should be considered and just what may be expected. It deserves consideration in a separate paper, however, and I hope before long to go into it thoroughly and try and show that a few formulae can be deduced for simplifying the consideration of the question. We will instead devote our time to a general discussion of the question and then briefly show by some curves a few interesting facts concerning cost of operation.

One man will tell you with a great glee that his car will cost him less to run than a horse. For certain expenses for the entire year. Another man will tell of a depleted bank account and no satisfaction to balance it up. Consequently, the average individual forms a very unpleasant opinion of all men's veracity and a very decided opinion of the uncertainty of the automobile.

Now the facts are these: Of two identical



equipments, operated under similar conditions in the same town, one is expensive to operate and the other is cheap. Just one cause for this—the care given to the vehicle and the way it is operated. In other words, the personal equation. The same results are seen in the wear and tear on horses. But we have become callous to the dumb animals' maltreatment and pass it by. Why some posthumers spend \$1,000 to \$3,000 for an electric carriage containing a battery and one or two electric motors and then blissfully jog along without giving the vitals of their investment but very scant attention is a mystery. But they do it right along. They seem to think the thing ought to look out for itself and come around to their office and demand attention when needed. The fact that the whole affair is so quiet and docile and does not "holer" and squeal when neglected results in further abuse. Very soon the owner becomes a pessimist and the automobile gets blamed, per se. The same general principle applies to the steam and gasoline automobile, but in each of these cases the evidence of mechanism is so apparent there are so many reciprocating parts to rattle if they get loose and bearings to squeak if not oiled that the owner is compelled to give them attention for his own piece of mind. Some one ought to invent an attachment to a storage battery to bit the operator over the head every third time he exhausts his battery down to the last gap or does some equally fool thing.

I have enlarged upon the above facts simply to emphasize that the personal element enters more largely than is generally supposed into the success or failure of an automobile.

One need not forsake his family and his friends and move into the stables, but he must get to understand it, to know its limitations, to know how to avail himself of its advantages, before he can get satisfactory results.

You have doubtless already been told by the motor and battery experts just how these parts of the machine should be looked after. So I shall not attempt details. Let me simply emphasize the absolute necessity of a complete understanding between the man and the machine to get good results. Some owners and operators have scarcely a long acquaintance with their machines.

What has been said above bears particularly upon the private or pleasure vehicle where the owner is most often the operator.

Turning now to a strictly commercial automobile a high order of intelligence cannot be hoped for in the operator, and hence the machine must be made to withstand its punishment on the road as it comes along. Care at the stable, however, is just as imperative as in the case of the pleasure craft.

The success of the commercial automobile depends upon two main points: 1—adequate equipment; 2—intelligent inspection and care. The trolley car or the locomotive receives no attention on the road, but upon its return to the barn or roadhouse it is worked over by a competent man. So it must be in the case of their comrade, the commercial vehicle, if success is to be expected.

In the electric vehicle there are only three vital organs—the battery, the motor, the tire. Automobile builders have sometimes yielded to the demand for low initial cost and have neglected these three items. Result—short life, great expense of operation and dissatisfaction. There is a certain safe load that a Pullman car axle can carry continuously with safety. Increase this load seriously and great reduced life of the axle results. Similarly a gives storage battery can do a certain amount of work continuously and at a certain maintenance expense. Overload it and the length of life comes down and the cost runs to prohibitive figures. Just so the 3½-inch tire may fall in a few months with a bad showing of penmanship and a mile as tire cost, while a 4½-inch tire would do the same work at not over 1 cent a mile. It is difficult to impress this fact upon intending purchasers, but the company which refuses to underequip its vehicles will win in the long run. The public must look further than initial investment and realize that a little increase in initial investment may buy an insurance

against short life and high operating expense. It certainly cannot be challenged that a man is exhibiting good judgment if he puts \$2,500 instead of \$2,000 into an automobile if he can reduce his operating expense per mile 50 per cent.

I doubt if I have laid anything like adequate stress upon the absolute necessity of adequate equipment. The popular tendency towards lightness in automobile construction is all right if it does not go too far. But like such tendencies, the pendulum is apt to swing too far. And as regards battery and tire equipment on commercial automobiles the pendulum has undoubtedly swung too far and some good people have been hit by it. There are now, however, indications that the chaser is coming to his senses and there is a room for good conservative engineering to make itself felt and not be negated by enthusiastic and sometimes not overcautious sales management.

The other element of importance in this consideration is care of the vehicle at its home station. Intelligence must be exercised here and the company which places the care of its vehicles in the hands of some jehu who knows a positive from a negative plate only while the tag is still on will soon join the disgruntled minority who believe the electric automobile is a snare and a delusion. Delivery wagons can be built and are being so built that the test of the former employed can be transferred to the automobile and get along all right with little or no experience. The man in charge of the vehicle, however, whose duty it is to keep the batteries in shape and give them the regular attention they require must have brains and practical experience with batteries and motors. He need not be a retired college professor or even the possessor of an B. S. But he must know what he is about. As you have been told all about batteries I cannot attempt to tell you what to do to them to make them a fair return on your investment. I can simply emphasize again the fact that too small battery, tire and motor equipment means failure, and that adequate equipment coupled with adequate attention means success.

Coming now for a moment to the actual cost in dollars and cents, I have laid out a little chart showing the cost of recharging the various electric batteries under service conditions and at varying rates of current cost per kilowatt hour. To figure the total cost of operation of electric automobiles requires that a great many items be reconsidered.

They may be grouped and condensed as follows:

A—Interest on original investment.

B—Depreciation.

C—Cost of maintenance.

Interest on investment is a simple matter. Depreciation is not so easy. Correctly to get at this matter we must first understand that battery and tire items are not included here, as they are charged off under maintenance. This leaves only the motors, controller and the general wagon proper. It can be shown that these bear a fixed ratio to each other and their rate of depreciation is fairly well known from past experience.

Maintenance includes current repairs to the battery and renewals of plates at which time the battery is as good as new. This is why the battery may be said to suffer no depreciation. It includes also tire repairs and the renewals of worn parts, at which time the tire is also as good as new. Also general repairs to the wagon proper. This is a well known percentage from past experience. Also cost of charging current. This can be closely calculated.

Thus it can be shown that by a suitable dissection of the elements of an electric we can practically deduce a formula which can be made to read in the form  $ax + by + cz$ . We cannot stop now to go into the full detail of such a formula. The cost may be reduced to two bases, the cost per vehicle mile and the cost per ton mile of merchandise hauled. The cost per vehicle mile increases directly with the size of the vehicle. The cost per ton mile decreases at first rapidly and then slowly as the size of the vehicle increases until at about 5 tons capacity would seem to lie the economical limit of the size of the storage-battery electric truck. It appears that for general delivery purposes, where the expense of operation can be figured by the owner, only one, the basis of vehicle miles, the load being too small or irregular to estimate closely, a small machine is best and most economical. While for the general transportation of merchandise in heavy work the larger the unit up to about 5 tons capacity the better.

On the score of efficiency there are two ways of looking at the question: 1—How much do different systems cost? and 2—What is the comparative satisfaction they give? One might do its work at a slightly less cost in actual dollars and cents, but it might be so obnoxious as to be unbearable, while another at a higher figure might prove satisfactory all around. There is absolutely no data available as to the relative cost of differ-

ent systems for commercial vehicles, nothing but electricity having been used enough to yield any data.

Some two years ago the Automobile Club of America held a 50-mile non-stop endurance run, in which the amount of gasoline and water used by the contestants was accurately reported. One electric was entered and from the performance of these three types under similar conditions the actual cost of the power used can be figured fairly closely. Figuring the cost of gasoline at the time at 10¢, cents per gallon in barrel lots; "lubricating oil for both gasoline and steam engines at 30 cents per gallon, and current for the electric at 4 cents per kilowatt hour we have the following table of relative costs reduced to a common basis of moving 1,000 pounds one mile:

Steam, using flash boiler..... 52 of a cent  
Gasoline..... 52 of a cent  
Electric..... 46 of a cent

It will be thus seen that on a basis of converting dollars directly into horsepower at the rim of the wheel the electric is intermediate the steam and the gasoline. This, of course, considers only the one item of fuel supply.

Now, briefly summing up the points which we have attempted to bring out, we will call your attention to the following general items: The electric automobile is one of the oldest in the field and was the first form to be reduced to practice on a large scale and placed upon the market.

The requirements of an ideal power system for pleasure vehicles are: Comfort, reliability, simplicity, cheapness. For commercial vehicles they are: Cheapness, reliability, simplicity.

The electric system meets these requirements admirably on account of its quietness, absence of vibration and odor; on account of the inherent advantages of the electric motor such as its wonderful overload capacity; its automatic adjustment of load and speed; its rotary motion, and its resistance to damage in unskilled hands. The electric system is of almost unlimited application from the lightest runabout to the 5-ton truck for passenger and goods transportation.

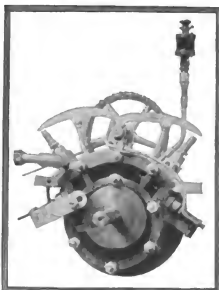
The success of the machine in private hands depends primarily upon the good sense and judgment of the operator. The personal element is the principal one. The success of the electric business wagon depends upon adequate equipment and intelligent care.

## THE FIELD OF MOTOR CAR DEVELOPMENT

One of the most interesting mechanical novelties at the Cleveland show was the working model of a rotary gas engine which was designed and exhibited by Otto Konigsloew, manufacturer of automobile materials at Cleveland. Mr. Konigsloew has been working for many months on the device, and while he does not claim it is perfected, he maintains that it is thoroughly practical and possessed of a number of advantages over the ordinary reciprocating type of gas engine. Many of the numerous experts who examined the machine during the week were greatly impressed with his invention and were inclined to agree with his views.

The engine, which is here illustrated, was designed simply as an experimental model and a number of changes have already been suggested which will be worked out in future machines. The cylinder portion is a circular casting about 8 inches in diameter and  $\frac{1}{4}$  inches wide, outside measurements. The piston is a solid piece about 6 inches in diameter, with a shaft through the center and is set in the upper portion of the cylinder, leaving a crescent shaped opening below which about corresponds to the displacement of a 6-inch stroke in a reciprocating engine. The piston is provided with a single blade which is held outward by a spring, and in revolving it follows the eccentric formed by the cylinder.

Above the cylinder and made as part of the

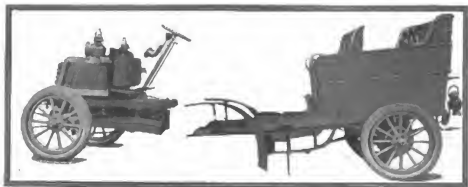


THE KONIGSLOEW ROTARY MOTOR

same casting are three chambers. Looking at the motor as shown in the illustration, the chamber on the left is the intake chamber, that on the right is the exhaust chamber, while the one in the center is the compression chamber. From the exhaust chamber and from the intake chamber leading into the cylinder are ports which are never closed, while in the compression chamber leading into the two outside

chambers there are ports which are provided with valves. Above the inlet chamber is an inlet valve and above the exhaust chamber is an exhaust valve. All four valves are operated by cams on a timing shaft over the cylinder, the shaft being driven by chain and sprockets geared three to one.

Starting with the piston blade at the port leading into the intake chamber, as the blade passes that port, the intake valve opens and the charge is drawn into the cylinder until the latter is completely filled. As the blade passes the intake port again, the intake valve closes and the mixture is forced around by the blade through the port into the exhaust chamber, and from there through the valve into the compression chamber, where it is compressed. As the blade passes the port on its third revolution the valve from the compression chamber into the intake chamber opens, and the compressed gas passes through the port into the cylinder and at this instant it is ignited by a spark in the usual manner, the spark plug being in the center of the compression chamber. The back part of the piston adjoining the blade is cut out so that the expanded gas strikes on a considerable surface and the piston is given its impulse. As the piston comes around the fourth time, a new charge is drawn in, and the exploded charge is forced around and out through the exhaust valve, completing the cycle. The movement of the piston is accelerated by



THE LACOIN SEPARABLE CHARRUE

an ordinary fly wheel on the main motor shaft.

Mr. Konigsow is undecided whether to call his invention a three-cycle, a four-cycle or a six-cycle gas engine and the experts who have examined it do not appear to coincide on this point. But the fact remains that it goes, and that it seems to possess a number of advantages over the ordinary style of gas engine. The present model has a maximum speed of 1,600 revolutions and it is estimated to develop  $3\frac{1}{2}$  horsepower. No method of cooling was provided on the model, but it has been run 20 minutes in a closed shop without overheating. There is no vibration to the motor; resting on a light framework, it has been run without holding down bolts and without movement of the frame. The speed of the motor may be controlled within certain limits by varying the amount of mixture and changing the time of the spark, but under the latter method the conditions are exactly opposite those existing in a reciprocating engine. On the ordinary four-cycle reciprocating gas engine, the farther the spark is advanced, up to a certain limit, the greater the speed, while on the Konigsow engine, after the gas is compressed, the nearer to the point of highest compression the greater the speed, and the farther away the less the speed; hence the highest speed is obtained by holding the spark rather than by advancing it. The small size, compactness and light weight of this motor are obvious. Mr. Konigsow is preparing to build a water-cooled motor of this type which will be designed to develop 10 horsepower and he plans to fit it to an automobile. He may decide to place two motors in a car and operate them in multiple from the same shaft. In the larger motor which will be built, the face plate will be made with a groove fit to prevent leakage. In the present model, the cover and face were ground and rubbed for perfect accuracy and there was no leakage.

#### A DIVISIBLE CAR

Almost as early as the beginning of motor cars has there been experiment in the line of complete motor tractors which might be adapted to the propulsion of any kind of an after carriage. The proposition has been elusive and alluring to inventors, this proposition of the mechanical horse. It has been the incentive for the production of all sorts of freaks as well as of doubtfully or fairly practical devices. Commercially the tractor has never gained much headway, owing, no doubt, to the fact that a fore truck large enough to carry the whole mechanism of a car is so unwieldy and so unsightly that the rig produced by its use would be ugly even if efficient.

That the tractor has utility, however, cannot be denied, for it represents one of the simplest

ways of rendering a motor car interchangeable in form, to correspond with changes in the purpose of its use. It represents the change of a brougham into a touring car by the manner equivalent to releasing a horse from the shafts of one carriage and harnessing him into those of another. It is probable that this same result may be obtained differently, by equipping a universal running gear with a variety of bodies, each independent of the working parts of the car and all quickly removable or attachable.

Giving the tractor proposition the benefit of the doubt, however, a scheme devised by one Lacoin of somewhere in France, and brought into practical shape this season on a specially built Darraq car, becomes one of the most interesting developments of this branch of motor car construction. The Lacoin system really represents a tractor, though in application it is more like the dividing of a motor car of ordinary construction into halves in such manner that a universal front half may be fitted to any of a number of different rear halves, the front half representing the power plant and the rear half the coach or body section.

There is no attempt to make the front truck the traction truck. It is simply the front portion of a chassis of ordinary construction, carrying the motor, transmission gear and controlling mediums and insertable quickly into a rear frame which carries the body proper and the driving wheels, the power connection between which and the motor is made through a propeller shaft with readily detachable coupling.

The car, when assembled—or coupled—is apparently a regular car, the evidences of its divisibility being hidden. It is certainly clever, its merit rests upon two things—the necessity of such construction as opposed commercially to the universal chassis with several bodies,

and the strength and rigidity of the separable frame.

The front wheels support a sort of sub or inner rectangular frame, upon which are mounted the motor and transmission gear and various other parts of the power plant. This is inserted between the side bars of the rear frame and held in place by four special bolts, one at each corner. Each of these bolts consists of a shank with a rectangular head, so that by giving the bolt a quarter turn, the retained part may be slipped over the head. The shank is provided with a handle to allow this turn to be made without using a wrench, while a stout coil spring under the taper seat of the coupled parts is supposed to always keep the bolt under sufficient tension to render the joint self tightening.

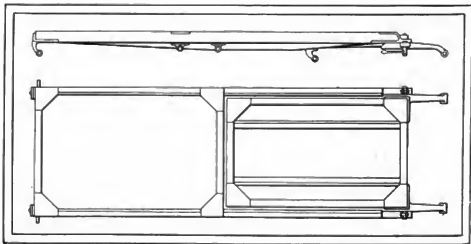
The coupling in the propeller shaft is also separable manually. It comprises a pin joint the head of whose pin has a head with two flat rectangular shoulders, one above the other. One seat engages a stationary lug or ear on the yoke member of the coupling, while the other engages a spring retained catch which normally presses against its lower face. By pressing downward with the hand on this catch the pin is loosened and may be given a half-turn, so that both rectangular shoulders are freed from their respective catches. The pin may then be drawn out, separating the two members of the joint.

If all of the elements of the power plant are carried on the front truck no other couplings are necessary between the two parts of the car, but if the gasoline or water tanks, muffler or any other parts whatsoever that relate to the motor are carried on the rear part, suitable couplings must be provided and it is possible that more difficulty would be experienced in rendering these both secure and conveniently separable than in the case of the propeller shaft coupling.

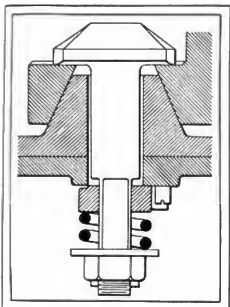
#### PISTON RING GRINDER

As one may readily understand, the fitting of the rings in the piston of a gasoline automobile motor is a matter of considerable importance and of no little skill. Piston rings are really double-seated cheek valves to prevent the escape of the gases in the cylinder and their fit in the piston must be exact when the motor is first assembled. Experience has shown that the power of an engine can be increased 5 to 10 per cent by having rings ground to fit the grooves perfectly where previously there was a loose fit.

The Heald Machine Co., of Worcester, Mass.,



THE LACOIN DOUBLE SEPARABLE FRAME



LACON PARTENING BOLT

has devised and now builds a piston ring grinder which is not only intended to give piston rings an accurate finish, but to also save time in manufacture.

In fitting piston rings it is easy enough to make the grooves all of a standard width and nicely finished, because the pistons are comparatively heavy and rigid and are large enough to be easily handled. But with the rings it is different. These are usually cut off several at a time from a cylinder which has been turned to an approximate size. The edges of these rings, as they come off the cylinder stock, are somewhat rough and the rings are naturally over-size. The difficulty of finishing them well and accurately lies a good deal in the difficulty in holding them during the finishing operations. Hence the machine of the lead company is built around a magnetic chuck, on which the rings may be laid and ground to the required thickness. This process obviously results in a truly flat surface on each side and in a uniform width of ring at all points in its circumference.

The magnetic chuck for holding the rings during grinding is mounted on a vertical spindle with micrometer adjustments, indicated by a graduated hand wheel. The chuck is driven by a set of gears inside the machine body, where they are protected from dirt and injury. The cone driving pulley with a number of grooves gives a variable speed for the chuck and allows simple adjustment of speed to correspond to different sizes of work, so that the correct grinding speed may be maintained. The grinding wheel is mounted in a cross slide which can be traveled over the work by means of a hand wheel. A cross feed can be supplied instead, if desired. The grinding wheel may be fed to the center of the chuck, so that if it is wished the grinding of such pieces as disks, thrust collars, dies, etc., may be readily handled on the machine.

The column of the machine is made in two parts and provided with an adjusting screw, so that correct alignment of the chuck can be maintained and the machine made to grind absolutely flat surfaces at all times.

In the matter of speed in operation the makers say the machine can finish rings on both sides and of a standard thickness at the rate of fifty an hour. This speed has been approached

in experimental grinding of sample rings a few at a time and to fit pistons sent as guides. With a regular lot of work ground to a standard gauge the maker believes fifty an hour is a conservative estimate.

The grinder is certainly an interesting piece of automobile making machinery.

#### MOTOR MISCELLANY

John C. Wood, who was a potent factor in the cycle trade of Washington in the palmy days, has entered the automobile trade, and is now connected with the National Capital Automobile Co.

Mrs. E. J. Pennington, wife of the general manager of the Cleveland Motor Co., of Cleveland, O., died of pneumonia at Cleveland last Friday. She was formerly Miss Alice Butterfield, of Milwaukee, Wis.

The German Automobile Club has chosen a road passing through the villages of Lubeck, Schmalbeck, Lobbeck, Muhlensbeck and Heunstedt for the German trial races. The circuit will measure about 32 miles, and is located near Itzehoe.

Charles L. Seabury & Co., of New York, have opened a western office in Chicago, with Dan B. Southard as western representative. The concern will send a motor boat westward which is due to arrive in Chicago April 15. It is said to be capable of covering 21 miles an hour. The Chicago house will also sell Howard automobiles.

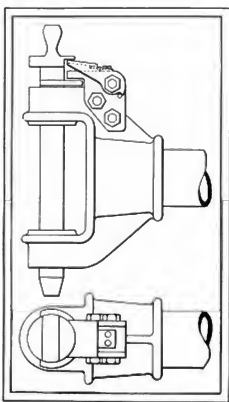
A number of men and officers of a regiment of German engineering corps are making experiments with two motor cycles, two tourist cars and two automobile trucks in the Harz district, which is very mountainous. The tests will last 2 weeks and are being made to determine the efficiency of motor vehicles in mountainous country.

The Losier Motor Co., of Plattsburgh, N. Y., and Jersey City, N. J., is turning out a racing boat 25 feet long which will weigh, with the motor installed, less than 1,000 pounds. The motor will develop from 24 to 30 horsepower at 1,000 revolutions and will turn an 18-inch wheel. The estimated speed is better than 20 miles an hour.

"It will be no fun," recently said a Belgian driver, "to drive in the cup race. It will be hard work, and for my part I am going to put on the very best kind of brakes I may be able to find. Careless driving will be out of the question, because the course is danger-



THE HEALD PISTON RING GRINDER



THE WILSON

LACON PROPELLER SHAFT JOINT

ous and the few straight stretches don't seem to me to allow anyone to take a great lead. I believe the driver who will have the least accidents will have the best chance to win."

The address of John Farnon, president of the Chicago Automobile Club, on "Good Roads the Nation's Salvation," delivered at the American Motor League banquet at the Victoria hotel in Chicago on Lincoln's birthday, has been published in pamphlet form and is being distributed throughout the country by the New York and Chicago Road Association.

The capital stock of the A. L. Dyke Automobile Supply Co., of St. Louis, Mo., has been increased to \$25,000, paid in, and a charter has been granted by the state. The officers of the company are A. L. Dyke, president and manager; Robert Britton, vice-president. Plans for increasing the business have first taken definite shape in the securing of all of the building in which the company is located, but half of it being previously occupied.

Automobile driving has become a popular pastime on the ice on the Hudson river this winter. The surface is rough as a rail, owing to the snow. The smooth spots cause occasional skidding, which is not dangerous and adds only spice to the sport. The resistance is insignificant and high speed easily possible. An Autocar recently easily negotiated 9 miles on the ice in 15 minutes. A tour from Poughkeepsie to Albany is intended by local clubmen.

The Automobile Club of France has requested its official timekeepers to produce an observatory certificate, showing that their chronometers have been examined within the past three years. Only certificates from the observatories of Besancon, France; Kew, England, and Geneva, Switzerland, are recognized by the French club. Most of the timekeepers have raised a protest against the decision, claiming it is unnecessary to have chronometers examined so often, and furthermore may that the expense connected with the examination is greater than they wish to stand.



# FROM THE FOUR WINDS



The Ranelagh Club, of London, England, will hold its automobile races on Saturday, June 11.

The Bullock-Bersford Mfg. Co., of Cleveland, O., has decided to increase its capital stock to \$100,000, and has issued a call for a meeting for that purpose on March 28.

A Rambler show room has been opened in Milwaukee, Wis., by Thomas B. Jeffery & Co., with Mark W. Heath in charge of the sales department. The establishment is located at 312 Wells street.

King Edward of England is the owner of seven automobiles, five of which are of British make. One of the cars is an omnibus, seating fifteen persons, another is a heavy truck, while the others are touring machines.

The Schaum Automobile Storage & Repair Co., of Baltimore, Md., manufacturer of the Schaum spark plug, is incorporating a \$250,000 company and wishes to locate in some progressive city desiring a factory in the automobile line.

James Levy has resigned as secretary and treasurer of the Githens Bros. Oldsmobile Co., of Chicago, and on March 1 assumed the management of the automobile department of the Mead Cycle Co. The Mead company now handles the Benz-Parsifal and Orient, and other machines will probably be added this spring.

A prominent automobile manufacturer has received a letter from an anxious inquirer in Mobile, Ala., saying that his social club intends to give a masked character ball, and he would like to know the correct costume for a chauffeur to wear. He asks what would a pair of goggles cost, and then adds in parenthesis that the goggles are for the eyes. As an afterthought he writes a postscript asking if boots or shoes are worn.

The executive committee of the New Hampshire Automobile Club has decided to purchase the Leonia property at Hampton beach. The site is on a slight eminence overlooking the entire New Hampshire coast line. The estate consists of 15 acres, most of which is graded and laid out. On the grounds is a large barn 80 by 150 feet, two and one-half stories high, a water tower, artesian wells and a drainage system. The buildings are surrounded by magnificent pine trees. The estate was fully described in *MOTOR AGE* some weeks ago. The club house which the committee has decided to

build will not cost over \$5,000, the amount having already been raised. It is hoped to have the club house completed by Decoration day.

Alex Schwalbach, an occasional contributor to the motor vehicle papers on technical topics, has been offered and accepted the editorship of *Automobile Topics*, which will become vacant by the retirement of James P. Holland on April 1.

The city roads committee of the A. C. A. is to make a systematic tour of New York's asphalt streets and note the places where repairs are needed. Mayor McClellan will be asked to make these repairs and also petitioned to see that asphalt approaches to the ferries and the new Williamsburg bridge be provided.

George H. Jackson, United States consul at La Rochelle, France, has received an inquiry for prices on small electric motors, which should be of from 1-12 to 1-10-horsepower. They must be very compact and be able to run in either direction. Prices should be submitted for sample of one, also in lots of 100 to 1,000.

At a meeting of the Boston Automobile Dealers' Association, held last week, it was unanimously voted that for the protection of those who have purchased space at the Boston automobile show, no firm or individual other than those having exhibition space should be allowed to solicit business in the hall during the continuance of the show, except on payment of the sum of \$50.

There is considerable dissension among the members of the Automobile Club of Great Britain and Ireland over the manner in which the club has been managed, and a reform movement has been started. If the reform movement fails it is said a large number of the members will resign and start another club free from the objectionable elements that have placed the club in its present unfortunate condition.

According to an English trade paper, the Society of Motor Manufacturers and Traders has decided that next year's show will be exclusively confined to motor cars and their direct appurtenances. It will thus become necessary to hold a separate motor cycle exhibition, and it is suggested that the Motor Cycle Traders' Association organize this show independently from the annual Crystal palace and Agricultural hall shows.

Santos-Dumont has been elected an honorary member of the A. C. A. Among the association members recently elected are: Dr. Charles Wood McMurtry, Vienna, Austria; Robert H. Comstock, Ivoryton, Conn.; Charles G. Burgoyne, Daytona, Fla.; C. J. S. Miller, Franklin, Pa.; John A. Wilson, Franklin, Pa.; George B. Leighton, Monandoeck, N. H.; John C. King, Chicago; R. S. Munger, Birmingham, Ala.; George Hamilton Flinn, Pittsburg, Pa.;



John Farson, Chicago; J. M. Lansden, Birmingham, Ala., and Howard Riegel, Riegelsville, N. J.

The motor cycle endurance run from Turin to Beila and return, a distance of about 110 miles, was won by Guippone, on a Peugeot machine, in 4:33:30. Pechacek on a Republic was second in 4:45.

The Automobile Club of Great Britain and Ireland has resolved that the word "chauffeur" shall be dropped and the word "motorman" adopted in its place, and also that "garage" shall be succeeded by "motor house."

The motor cycle has been brought into service for carrying the mail by C. L. Clayton, a rural route carrier at Wellington, Kan. This is the only motor cycle in the rural mail service of the state.

The automobile is rapidly growing in favor among the people of Salt Lake City, Utah. There are now about twenty machines in the city, and the prospects are favorable for a large sale this year of both pleasure and commercial vehicles. The automobile club is preparing and is planning a number of excursions for the coming summer.

The Joliet Automobile & Garage Co., of Joliet, Ill., has been organized with a capital stock of \$25,000. About seventy of the business men of the town are financially interested in the company. The directors are H. A. Fisher, F. E. Fisher, L. D. Fisher, E. S. Munroe, A. C. Dillman, H. F. Peppinbrink and C. C. Wilcox. The company is looking for a location to erect a building, and until a site is chosen it will occupy temporary headquarters and establish itself for the spring trade.

Dr. E. M. Eisenbeiss, of Indianapolis, Ind., has discovered that an electric automobile has other uses besides that of hauling people across country. He uses it to run the surgical apparatus in his office, finding it particularly handy in operating his x-ray machine. The doctor is contemplating the construction of appliances small enough to be carried around to the houses of his patients. He explains that electrical apparatus is often desirable when a patient is unable to visit the office. By means of his electric automobile power he can operate in their homes. "By driving my automobile up to a nearby window or door," said the doctor, "I can attach the wires and operate the apparatus in the sickroom. Most of my apparatus is too large and cumbersome to be

transported, but there is no reason why smaller and lighter contrivances might not be constructed."

◆◆◆

The Neustadt-Perry Co., 836 South Eleventh street, St. Louis, Mo., has reorganized. The business will be continued at the same location and on a more extensive basis. The name, however, becomes J. H. Neustadt Co.

◆◆◆

Among catalogues the new one of the Locomobile Co. of America, of Bridgeport, Conn., describing the Locomobile gasoline cars, is an example worthy of emulation, for in the extent and carefulness of its descriptive data it much exceeds the ordinary catalogue.

◆◆◆

The board of trustees of the Dayton, O., Automobile Club was elected last week as follows: Dr. C. A. Bonner, C. B. Wolf, Albert Thresher, A. M. Dodds, Carl Baumann, Harry Cappel and John Kiser. The trustees will meet later and elect officers for the ensuing year. The club will hold a race meet July 4.

◆◆◆

Angus Sinclair, publisher of the Automobile Magazine, gave an illustrated talk at the A. C. A. on Sunday evening on "Automobiling in Scotland." It embraced the details of a ramble about the Mearns, the county of Robert Burns's ancestors, and of a trip from there to Edinburgh, journeying through a number of towns and villages of historic interest.

◆◆◆

It is reported that Albert Champion, the French motorist, who met with a severe accident at Brighton Beach, last fall, has become a demonstrator for the Packard Motor Car Co., of Detroit, and that he will probably be seen again on the Gray Wolf or some other racing machine made by the same company at automobile race meets this summer.

◆◆◆

The city council of Elkhart, Ind., has passed an ordinance limiting the speed of automobiles to 8 miles an hour, requiring them to be numbered by permit issued by the city, and to carry lights front and rear. Non-residents may stay in the city 10 days without a permit.

◆◆◆

At the last general meeting of the German Automobile Club, Victor von Ratibor was re-elected president; Prince Christian von Hohenlohe-Oehringen and General von Habs, vice-presidents; General Becker, president of the technical committee; Count de Talleyrand-Perigord, president of the financial committee and also of the reception committee; Baron von Brandenstein, secretary general; Eugene Reis, president of the touring committee; M. von Kuhlmann, president of the club house.

Elmer De Pue, 46 East Van Buren street, Chicago, is displaying Buffalo electric cars at the salesroom of Pardee & Co., 1404 Michigan avenue.

◆◆◆

The Welch Motor Car Co., of Detroit, Mich., the object of which is to engage in the manufacture of machinery, engines, automobiles and other products, has been incorporated with a capital stock is \$50,000. Arthur Peck, of Orchard Lake, Mich., is the principal stockholder, owning 399 shares. George S. Hodges owns fifty shares and Allie R. Welch one share.

◆◆◆

P. J. Dasey has established headquarters at 435 Wabash avenue, Chicago, as selling agent for the Molsinger Device Mfg. Co., Auto-sparkers; Warner Differential Gear Co., differential gears, back reversing clutches and steering wheels; the Induction Coil Co., Mueller spark coils; the Detroit Motor Works, Starite spark plugs; J. Lanth, single and double-cylinder horizontal motors; the H. L. Hoffman Motor Co., two and four-cylinder vertical motors; J. H. Wheeler, Schebler carburetors; Bock & Severin, circulating pumps.

◆◆◆

The United States Transfer Co., of Philadelphia, Pa., has decided to dispose of its horses and mules, over 1,000 in number, and replace them with sixty electric wagons. The company believes that with this number of electric wagons it will have a decided advantage over its competitors. Three of the wagons ordered by the company will be the largest ever built, carrying loads which formerly required the services of four horses with relays every 6 hours. The other wagons will have a hauling capacity of between 1,000 and 3,000 pounds. The company will spend about \$30,000 in remodeling its stables.

The Iowa legislature has passed a bill requiring that automobiles be registered with the secretary of state and limiting the speed at which they may be driven at 20 miles an hour in the country.

◆◆◆

The annual meeting of the Automobile Club of Philadelphia, Pa., will be held at the Manufacturers' Club on Monday evening, March 14. The ticket placed in nomination by the board of government is as follows: Henry G. Morris, Louis J. Kolb, H. Bartol Brazier, Ellis Ames Ballard, Isaac Starr, Jr., and Frank C. Lewin.

◆◆◆

Baron Joseph de Crawhez, on a 70-horsepower Panhard-Levassor racer, won the Sweden cup, near Alger, Africa, February 21. The distance was 1 kilometer, and the winner's time 32 seconds. De Malgival, on a 45-horsepower de Dietrich car, was second in 57.3.5. He had an accident during his run. A kilometer race for tourists was also won by de Crawhez with a 24-horsepower Vivianis car.

◆◆◆

Judge Brown, of the United States Circuit Court at Boston, Mass., has dismissed the bill of Henry C. Folger and Harry Moriarity, representing the American Coll. Co., against the Dow Portable Electric Co. The bill asked for an injunction to restrain the Dow company from alleged infringement of patent 696,670, issued to Folger, Moriarity and Edward B. Jacobson on April 1, 1902, for improvements in sparking plugs for electrically igniting the gas in explosive engines. The court held that the patent is void because it covers no invention in view of the prior art.

◆◆◆

At a hill-climbing contest on the Boulevard Perier, almost in the center of Marseilles, France, thirty-nine of the forty-six competitors who had entered, started. From 25,000 to 30,000 spectators watched the tests. Most of the French manufacturers were represented, and the events were so thoroughly satisfactory that several similar competitions will be held during the summer.

◆◆◆

The Society of Draftsmen of the Automobile Industry is an organization formed in Paris a few weeks ago. The object of the society is to study the automobile trade in detail, through lectures and conferences, and to furnish manufacturers with competent draftsmen. The Syndicate of Selling Agents for Fittings



PHOTO AM

A THOMAS CAR PARTY NEAR BOMBAY, INDIA, WHERE GASOLINE IN SCARCIE, BUT CHARMING SCENERY IS PLENTIFUL

The Shonnago Valley Automobile Co. has been formed at Sharon, Pa., and will do a general business. The company is composed of Sharon men and the officers are: President, T. S. B. Wood; secretary and treasurer, E. C. Davis. Agencies will be secured.

for Cycles and Automobiles, is another association recently formed in Paris, and not one of the least important among the already many existing. It is stated that these agents annually transact business amounting to over \$4,000,000.

# AMERICAN MOTOR LEAGUE

## OFFICERS:

ISAAC B. POTTER, President,  
Potter Building, New York.  
CHARLES E. DURYEA, First Vice-Pres.,  
Reading, Pa.  
W. GRANT MURRAY, Second Vice-Pres.,  
Adrian, Mich.  
S. W. MERRIHEW, Third Vice-Pres.,  
154 Nassau St., New York.  
ROBERT L. STILLSON, Secretary,  
150 Nassau St., New York.  
FREDERICK B. HILL, Treasurer,  
52 Binford St., Boston.

National Headquarters:  
150 Nassau Street, New York

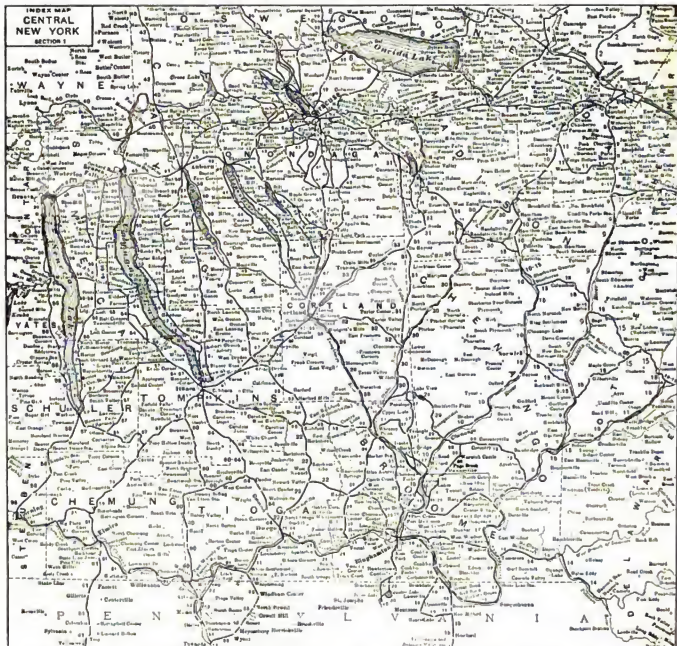


## CHAIRMEN OF NATIONAL COMMITTEES:

LEGISLATION—George B. Higwell, New York, N. Y.  
ROAD IMPROVEMENT—E. E. Olds, Lansing, Mich.  
LOCAL ORGANIZATION—Charles F. Potter, Denver, Colo.  
TOURING—W. H. Baker, Buffalo, N. Y.  
TECHNICAL—Charles E. Duryea, Reading, Pa.  
MEMBERSHIP—Frank A. Egan, New York, N. Y.  
SIGN BOARDS—John B. Price, Hasleton, Pa.  
RACING—A. G. Bartschelder, New York, N. Y.  
PRESS—Joseph Estocet, Philadelphia, Pa.  
HOTELS—Francis N. Bain, Newburg, N. Y.

## OFFICIAL BULLETIN

## THE AMERICAN MOTOR LEAGUE ROAD BOOKS



The New York road books—eastern, middle and western sections—are about ready for the printer. They cover about 14,000 miles of the best automobile routes in the state and extend eastward into New England and westward through New Jersey and into Pennsylvania. A more extended reference to this work, and to similar work planned by the league, will appear on this page soon. The map herewith is one of the section index maps, which in the road book is supplemented by detail maps of the different routes which are numbered in the index map. The rapid growth of the league means an early return of substantial benefits to its members. Let every member equip himself with a supply of membership blanks and do his share toward increasing the strength of the organization in his state.

# MOTOR AGE

VOL. V. NO. 11

MARCH 17, 1904

\$2.00 Per Year

## NEW ENGLAND STUDIES THE MOTOR CAR



not be stemmed, and it moved so rapidly from one exhibit to another that but little chance if any was secured for even a cursory view of the individual exhibit. It was certainly a first night with a vengeance, and a fitting climax to the great and persistent work which was done by the show committee, a success which their efforts certainly warranted.

The first impression of the display in Symphony hall was a most favorable one, which will surely improve as the week progresses and when one has an opportunity to

give the exhibit some little personal attention and consider it exhibit by exhibit instead of as one great collection. The arrangements in Symphony hall itself are much the same as last year, the decorations being decidedly plain, the signs and everything else being in keeping with the permanent decorations of the hall. In the marbled vestibule and corridors, however, the exhibitors were given greater latitude in the matter of decorations, the result being that the majority went in for decorations on an extensive scale and electrical signs predominated. Perhaps the most striking of these were the elaborate displays made by Hollander & Tangeman, who reproduced their famous New York display.

Owing to the limitations of hall space it was decided some time ago that exhibitors should display but one machine of any given model and the wisdom of this was most apparent on the opening night, as thereby a more varied exhibit of machines was possible, and

no one exhibitor secured greater space than he could use, to the detriment of some one other. The displays were what in theatrical parlance might be called "handsomely staged," and that too in every department of the show, although two halls had to be impressed into service to in any half way meet the demands of the manufacturers and dealers.

Although nominally a local show it must be admitted that in point of exhibits and interest this has become a close second to the New York display and in some ways, although it may seem somewhat egotistical to say so, Boston has certainly scored a point even on the latter show in displaying a collection of the famous Napier cars, the first shown in this country, and also in the display of the speedy Georges-Richard car, which has been imported by a prominent North Shore automobilist, and which at one time was considered as the car on which the validity of the Holden patent-rights as applied to importations would finally be fought. This car has a most interesting history and—but as Kipling would say, "That's another story."

The floor of Symphony hall has been covered with a carpet which was made especially

**B**OSTON, March 14—The automobile show has again invaded the very heart of aristocratic and cultured Boston, and in the halls erected in the name of music and floriculture—Symphony and Horticultural—the latest creations in motor vehicles and motor bonts are now being inspected by thousands.

A year ago Boston and her show gained a name and fame for themselves, and the record then established will surely be surpassed during the week of the show which was inaugurated this evening. It was not to the accompaniment of the brazen notes of the automobile horn or the clanging of the perhaps more musical bells, that usually warn one of the approach of the automobile, that the show was opened. Boston is seemingly too cultured for such plebeian performances.

The doors of both halls were thrown open, and while the bands played the public took occasion to see what there was to be seen; that is, if it got a chance, which is exceedingly doubtful, as the crowd was so great that one had to allow himself to be carried along with the stream of humanity. There was no fighting against the current; it could







for the banquet tendered the English Ancients by the famous Boston organization last fall, and beneath each car, although they are clear of oil, either gasoline or lubricating, has been placed a neat dip pan, the result being a most business-like appearance.

In Horticultural hall, across the street, greater pretences have been made in the matter of decorations, all restrictions having been removed as this building is considered as the best fire proof structure in the city, only the floor being of a nature to catch fire, the walls and everything else being of firebrick and iron. The great majority of the exhibitors here have gone into decorations on an elaborate scale, and especially so the Napier people, who have secured the music room to themselves. The bare brick of the four walls have been hidden beneath a wealth of red, white and blue bunting. As one enters from the main hall he is confronted by the lion and the unicorn of Great Britain, around which are entwined the flags of this and the mother country. Directly opposite is found the coat of arms, or seal if your Americanism does not permit the other term, of the United States, also flanked by the stars and stripes and the union jack. Then at one end of the hall is the seal of Massachusetts, opposite to which is the business sign of the Napier Motor Car Co. and a map showing the route taken by Mr. Glidden in his trip to the arctic circle last year. The cars displayed are four in number and are shown to great advantage in this setting.

The motor boat department, although rather small, is most interesting, containing as it does the boat of Smith & Mabley and other less noted boats, built some for speed and some for practical business purposes, as illustrated by the fishermen's motor dories. This display certainly lost a valuable exhibit by the nonarrival of the Fiat boat, which was so badly damaged in its removal from the sportsman's show in New York as to prevent its being put in repair in season to be shown at Boston, however much the firm regretted its inability to secure some Boston patronage.

In the line of accessories and sundries Boston has not such a vast and endless line of displays as possessed by the New York show. This, however, is not considered as a lamentable fact. The space was needed for automobiles, and what if anything may be her loss in this particular was her gain in number and quality of automobiles. A local dry goods house—Jordan, Marsh & Co.—makes a fine display of automobile clothing and the four waxed figures mounted in a yellow colored Winton of 1904 model proved one of the interesting attractions of the show.

Taken as a whole the cars exhibited here are much the same as those seen at both New York and Chicago, there being, however, about half a dozen displayed that have not been shown elsewhere. These are the Napier, the famous English car; the Boyer, a French vehicle; the Amerique Populaire, manufactured in Lawrence, Mass., and Sanford, Me.; the Lyman, a high priced local car; the Country Club and the Glide car, a low priced vehicle handled by a local firm. At this time,

the opening night, these seem to be the only new cars in the show, although perhaps others will come to the surface as soon as the opening rush and crush is over. There is not a single freak in the entire exhibit, everything being of the practical order, which has gotten beyond the experimental stage, and this includes everything from the little Michigan car and the Orient buckboard, those very low priced vehicles, up to the most expensive of foreign and domestic cars, costing at the most: something like \$10,000.

Mr. Thomas, of the Napier company, who came from England with that exhibit, says that the Napier which will contend for the honor of representing Great Britain in the Gordon Bennett race will all have six cylinder engines, and will be the most powerful and speedy car yet built in the tight little Isle.

In the Napiers shown, four in number, the weights are all brought down to a minimum. The 18-horsepower car has four cylinders, electrical ignition, accumulators and water tanks. The engines in all the cars are four-cylinder, with the special Napier radiator, of the general appearance of the honeycomb type. By using corrugated tubes, a larger water space is obtained. The radiator is so arranged that even should the pump stop working the water is always sufficiently high to be above the tops of the cylinder heads, so that there is no fear of damage being done to the engine by imperfect water circulation.

Jump spark is used with the Napier high-tension synchronized ignition, which assures the explosion at exactly the same position of the piston in each cylinder, so that there is never any loss of power due to irregular firing. The magneto and ignition apparatus is located on the dashboard, where it can be inspected when running, and has only one



coil for the four cylinders. It is somewhat like the Eisman apparatus now used on the Panhards.

Another feature of these motors is the Napier hydraulic air regulator. This is a device for supplying the proper quantity of air to the carburetor. When the engine is running fast, the water circulation, where the pump system is used, is much more rapid than when running at a slower speed. Consequently, the water pressure in the cooling system varies with the speed of the motor. This is taken advantage of in the Napier to regulate the amount of opening of the air inlet valve. The water pressure works against a diaphragm which moves the valve spindle against a spring. As the water pressure increases, the diaphragm overcomes the resistance of a spring, thus opening the air valve, which is closed by the spring as soon as the water pressure diminishes. This opening varies constantly with the speed of the motor.

The Napier steering gear also deserves mention. To overcome trouble, the steering gear on the Napier cars is made with every joint and connection adjustable, so that any wear can be taken up and the steering wheel kept rigid.

The most striking car is the Fullman, which is a 28-horsepower car, having room for six passengers, two in front and four in the inclosed body. This has windows all around, with curved glass at the corners. The four seats are revolving arm chairs upholstered in scarlet leather. It has curtains to the windows, receptacles for hats and umbrellas, small tables, book racks, heating apparatus for cold days and electric lights in the ceiling. All the Napiers are painted in dark green, and are very highly finished, having the dashboard covered with nickel plate. The chains, sprockets and lamp brackets are also nickel plated.

Two of the other three cars are of 18-horsepower and the other a 24-horsepower. The latter has a Roi de Belge body of aluminum, with a canopy supported on six nickel plated uprights, with reversible glass wind shields in front over dashboard and three glass panels at the back, the corner ones being curved to shape of body. This glass forms an absolute protection against dust. Of the smaller car, one is fitted with a tonneau and canopy similar to the 24-horsepower, to carry three in the rear and two in front. The other has a parallel side tonneau body of aluminum throughout, and is supplied with a cape cart hood. This is intended to seat two persons in front and two in the rear. All these are upholstered in leather in scarlet. The Napier company has also a fifth car of 24-horsepower, which is to be used as a demonstrating car.

Alexander Winton and Charles B. Shanks were on hand at the opening of the show and, together with Harry Fosdick, who is known to every automobilist in New England, received congratulations on the excellency of this year's Winton product as well as on the handsome display made.

The three-cylinder Thomas touring car handled by Charles S. Henshaw was always the center of attraction and Mr. Thomas beamed with pleasure at the remarks he over-

### STRUCTURAL PERCENTAGES OF THE GASOLINE CARS AT THE BOSTON SHOW

KIND	FRAMES	PER CENT
Wood	.....	3
Angle steel	.....	45
Channel steel	.....	5
Armored wood	.....	6
Pressed steel	.....	32
Tubular	.....	3
Built-up steel	.....	3
MOTORS		
Air-cooled	.....	14
Water-cooled	.....	86
Horizontal	.....	31
Inclined	.....	3
Vertical	.....	66
One-cylinder	.....	28
Two-cylinder	.....	28
Three-cylinder	.....	5
Four-cylinder	.....	37
Six-cylinder	.....	2
IGNITION		
Jump spark	.....	93
Make and break	.....	7
TRANSMISSION		
Planetary	.....	30
Individual clutch	.....	11
Sliding gear	.....	59
PIXAL DRIVE		
Propeller shaft	.....	46
Single chain	.....	34
Double chain	.....	20
RADIATORS		
Coil	.....	45
Cellular	.....	55

hard, from those who know something about gas engines as applied to carriages.

Two makes of French cars—the Boyer and the de Dion—are exhibited by Kenneth A. Skinner. The first of these is a newcomer to this country, and is the result of much careful study and convincing demonstrating trials. The motor is of the four-cylinder vertical type, almost noiseless in its starting, owing to the style of governor, which operates on the gas inlet, and which allows the engine to run on slow speed without using an extravagant quantity of gasoline. The chassis is alike for all styles of cars, being built of armored wood. The series of gears contained in a case is simple, and comprises a fixed and sliding set, operated by one lever, so arranged that it answers all forward and reverse speeds. The parts used in the motor are all interchangeable, not only in the same motor, but from one motor to another. The inlet and exhaust valves are operated mechanically. They are placed side by side and are operated by the same cam shaft, and their position allows the incoming gas mixture to cool both the sparking plugs and the exhaust valves.

The Boyer is made in a two-seated runabout, with three speeds and reverse; light touring cars with four speeds and reverse and also heavy touring cars with four speeds and reverse, in power up to 45-horsepower.

Another new car shown is the American Popular, displayed by Chester I. Campbell, and which is manufactured by the American Automobile & Power Co., of Lawrence, Mass., and Sanford, Me. It embraces in its general make-up several distinct and novel features. The car is of the gasoline type, and the general lines follow that of the French models, the engine being situated in front of the car under a hood. The engine will develop 12 horsepower, and, unlike any other gasoline engine, the balance wheel is situated between the cylinders, and it is thus claimed that freedom of vibration is obtained, and, by giving four bearings to the wheel, it causes less wear and tear on the engine. Another feature of this engine is the internal air-cooled valves. This is entirely new, and the maker expects it will attract considerable attention. The body is fitted with divided seats. The entrance to the tonneau is by turning one of the front seats,



thus doing away with the rear entrance, which is generally used on the American cars. The car is fitted with sliding gear transmission and has three speeds forward and one reverse. It is made in runabout and tonneau, and Chester I. Campbell is the general sales agent, and is located at 5 Park square.

An expensive and luxuriously appointed car is the four-cylinder 30 to 35-horsepower Lyman, displayed by C. F. Lyman, of Boston. This car is virtually a new vehicle, manufactured within the confines of Boston. The exhaust and inlet valves are operated automatically, and the cylinders are cast in pairs. There is an individual clutch for each of the speeds, with direct drive on high speed. The splash system of lubrication is used, with an auxiliary pump and pipe running direct to every bearing. The machine is equipped with two brakes, one operating on the shaft and the other on the hubs. The car is built of wood with aluminum panels. The tonneau is detachable, so that the car can be turned into a touring vehicle. The tonneau is constructed on different lines from the average vehicle. It can be built up from the back to the canopy top, and glass windows let down between the tonneau and the front seat, as well as on all other sides of the car, thus turning the vehicle into a limousine.

The Country Club car, a high grade gasoline touring car, the only automobile controlled by pneumatic pressure, is exhibited by H. M. Woodard. The Country Club car was originally shown at exhibitions in New York and Boston, and attracted wide attention because of its exclusive feature, the pneumatic speed change and control. A small reservoir of compressed air, in which the pressure is maintained by every movement of the motor piston at the time of explosion, enables the operator, by a slight turn of the valve, to operate one of the three speeds or reverse. The body is a luxurious tonneau, with seating capacity for five persons. It is finished in a deep maroon, striped in black and gilt.

The list of exhibitors in Symphony hall is: K. A. Skinner, de Dion-Bouton; Pope Mfg. Co.,

Pope-Toledo, Pope-Hartford, Pope-Tribune, Cadillac; Oldsmobile Co. of New England, Oldsmobile; J. H. MacAlain, Locomobile; Moore & Smith, Autocar; Electric Vehicle Co., Columbia; A. T. Fuller, Packard, Northern; Harry Fosdick, Winton; A. B. Morrison, Peerless; Reed Underhill Co., Knott; Boston Auto Exchange, Phelps; Russell Drisko, Walter; E. A. Glimmer, Rambler; A. R. Bangs, Franklin; Ralph G. Coburn, Crestwood; A. G. Coburn, Cameron; George H. Lowe, White; F. E. Handall, Stevens-Duryea, Clement; Lewis & Mathews, Decauville; Chester I. Campbell, American Popular; A. T. Fuller, Orient; Pope Mfg. Co., Waverley; F. G. Read, Yale; American Darracq Co., Darracq; Locke Regulator Co., Waddington; Country Club Car Co., Country Club; Pope-Robinson Co., Pope-Robinson; H. H. Buffum Co., Hoffman; Hollander & Tangeman, Flat; Dowling & Maguire, Hovey; C. F. Lyman, Lyman; E. B. Gallaher, Richards-Brazier; C. H. Henshaw, Thomas; G. M. Brown, Apperson; Twentieth Century Mfg. Co., lamps; Continental Caoutchouc Co., tires; Boston Cycle Sundry Co., supplies; A. J. Wilkinson, sundries; National Oil Heating Co., kerosene burner; S. F. Bowser Co., tanks; Pope Mfg. Co., parts; Gray & Davis, lamps; Y. M. C. A., school.

At Horticultural hall the exhibitors were as follows:

Studebaker Bros. Mfg. Co., Studebaker electric; Jordan, Marsh & Co., automobile clothing; Buffalo Gasoline Motor Co., motors; Hollander & Tangeman, motor boats; H. H. Buffum, motor boats; Automotor Co., Automotor; Springfield Metal Body Co., aluminum bodies; Gasoline Engine Co., engine; L. C. Chase & Co., robes; American Machine Co., spark plugs; Groot Bros. Groot steamer; Trowett Automobile Mfg. Co., Prescott steamer; Angier Co., supplies; W. H. Simpson, Eldridge; G. H. Brown, Haynes-Apperson; Central Automobile Exchange, Stanley; H. W. Snow, Reber; C. S. Henshaw, Thomas Auto-Bi; Orion Supply Co., parts; Newton Crane Gas Engine Co., Boston; Charles H. Barney, National electric; Lyman & Burnham, automobiles; Covert Motor Vehicle Co., Covert; Gray & Davis, lamps; M. H. Wheelock, clocks; Napier Car Co., Napier; F. A. MacMaster, Queen; P. A. Williams, Jr., Ford; Columbia Road Auto Station, Yale motor bicycle; Atlantic Gasoline Engine Co., boats; Wayne Automobile Co., Wayne; Pope Mfg. Co., Columbia and Hambley motor bicycles; Newnam Fire Extinguisher Co., fire extinguisher; W. H. Horth, wrenches; Ullrich Co., cleaning soap; E. J. Willis Co., parts; Cooper & Woodward, polish; Bay State Tool Co., tools; Consolidated Box Mch. Co., boats; Thomas A. Stone Co., motors; Climax Igniter Co., ignitors; Smith & Mahley, motor boats and Treadwell; Truscott Boat Mfg. Co., motor boats, motors; Tappan Boat Mfg. Co., power dories; A. W. Tappan, Overland; R. F. Kelsey, motor boats; E. L. Smith & Co., supplies; Boston Gear Works, gears; Michigan Auto Co., Michigan; J. B. Emerson, canoes.

## PLANS FOR ROCHESTER'S FIRST SHOW

Rochester, N. Y., March 15.—Next week promises to be an eventful one in this city in an automobile way. The first automobile show ever held here will occur at that time, and automobile dealers, automobile owners and people who would like to be automobile owners are all working with might and main to stir the enthusiasm up to the boiling point. It isizzling now, and every indication is that the boiling point will be reached by the opening day.

Rochester has a population of almost 200,000 and it is situated in the midst of a prosperous farming district, but it has never yet experienced the joys to be obtained from an automobile show. Heretofore the dealers have

worked conservatively, each one looking quietly after his own interests, selling to his personal friends, and being content with the business that came without special effort. This year, however, there has been an awakening of interest, and there promises to be something doing. So many new agencies have been opened here that a spirit of friendly rivalry has sprung up, and each dealer will try to make his sales a record-breaker during show week.

The promoters of the show, Messrs. Megargel and Harrison, have had considerable experience in the management of cycle shows and excursions of wheelmen, and their first venture in the automobile line bids fair to be more successful than any of their ventures in the bicycle field.

The exhibition will be held in Fittsburgh hall, the largest building suitable for the purpose in Rochester. A large space running all around the building will be devoted to the display of automobiles and appurtenances.

A dog show is the attraction at Fittsburgh hall this week, and the barking canines will hold the fort until Saturday night, which will make it impossible to open the doors for the automobile public until Monday night, but the management promises faithfully that every dog will be gone by that time and as Mr. Megargel remarked, "There won't be a dog-gone thing to be seen but automobiles and bicycles next week."

Music will be furnished throughout the week by Minges' military band, a special program of concert music having been arranged for the occasion. Excursion rates have been made on all railroads and a large out-of-town list of visitors is expected to swell the throng.





# MOTOR AGE

Published Every Thursday by  
THE TRADE PRESS CO.  
1305 MICHIGAN AVENUE CHICAGO  
Telephone Calumet 2011

New York Office, 114 West 39th Street,  
London Office, American Publication Bureau,  
35 Manor Park Rd., Harington, N. W.

RECEIVED  
MAY 10 1934  
CHICAGO  
ILL.

RECEIVED  
MAY 10 1934  
CHICAGO  
ILL.

RECEIVED  
MAY 10 1934  
CHICAGO  
ILL.

Entered at the Chicago Post Office as Second  
Class Mail Matter

Subscription, Two Dollars per Year  
Foreign Subscriptions, Four Dollars

Any Newsdealer may obtain Motor Age through  
the Western News Co., Chicago, or any  
of its branches, on a returnable basis

## A COMMOTION

**F**RANCE is disturbed over the Selden patent. France is easily disturbed. It is often disturbed. Just now it is writing glowing editorials patriotically declaiming that this patent from America shall not tighten its grasp upon the great, original and only French automobile industry—hooray!

In fact, some of the French manufacturers and French automobile papers seem more agitated over the matter than do the unlicensed makers of this country who have more at stake. They look upon it as a sort of a national insolence hurled by America against France. They do not seem to be fully aware of the division of forces in this country.

In a way the writings of the Frenchmen are funny. In a way they are serious. They contain much that is not correct; they contain much that is of that variety of expression known commonly as "hot air."

Yet there is an underlying current of effort to actually produce for inspection and proof of legitimacy a car with disengaging clutch made before Selden's invention of the same thing and publicly displayed, operated and described before that time.

There is no telling what this upheaval of sentiment will amount to. It cannot very well affect the American situation directly. It may have an indirect effect upon the state of affairs here.

## CUP RACE CHANCES

**E**IGHT TRANS of three men each will probably compete in the James Gordon Bennett international cup race in Germany June 17. With twenty-four of the world's picked racing combinations of cars and drivers pitted against one another, the race would be a hard and closely fought one under any circumstances.

According to the expressions of several of the prominent European drivers who have been over the course, it is exceedingly dangerous on account of its many sharp turns. It has been declared that the contest will be a braking test rather than a race—that the greatest skill in driving the race will be in sudden slowing to round corners without losing much time.

If the course is as bad as it is pointed in this respect, two conclusions—which are some-

what contradictory, by the way—may be drawn. One is that Jemetry, winner of the race last year when it was run in Ireland, should be the "favorite" in the coming race. His has had about as much road racing experience as any of the continental drivers. He demonstrated his unquestionable skill in the Irish race. Above all, he is now—according to French newspapers—practicing almost daily on the course over which the race is to be run in June.

With a high degree of skill, a proven car, the Mercedes, and several months of practice in taking the very turns which are to be the bugbears of the race, he may easily be considered as one of the most likely candidates.

On the other hand, a conclusion drawn from the fitness of cars instead of from the fitness of drivers, may be made which favors the winning of the race by some light car such as the Renault or Darracq or one of the light American cars, if these prove to be light machines.

Judging from last year's race, the speed average on the straight stretches is not likely to exceed the speed possibilities of any car in the race if they are all in good trim. Hence ability to be quickly slowed for quick taking of turns will be a prominent factor. Naturally a light car with excellent braking system can be thus handled on corners with greater facility than a heavy car, other qualities being equal.

The American team will have a hard time to win the cup—because whoever wins the cup it will be won by a harder struggle than has ever marked such a race.

## A SEASON OF TOURS

**T**HIS will be a season of automobile touring. The budding activity in this line in 1903 has loth whetted the appetite of motorists throughout the land for country travel and demonstrated the absolute reliability of the automobile in such.

This season will be the beginning of the common use of motor cars for cross-country riding—the beginning of an era when stories of long trips will be too common to be retold, when a man must cross the continent, go around the world or drive through the chilled heart of the Klondike to get credit for having done anything out of the ordinary.

The season's touring will, of course, center in the joint tour to the Louisiana purchase exposition at St. Louis, but it will not be confined to this mobilized pilgrimage.

By their own routes and to suit their own devices automobilists will cobweb their way over the country to their hearts' content, seeking the great delight of open air travel without schedule or without restraint.

The rapid spread of the touring desire in the greatest asset of the good roads cause. The farmers need better highways more than any one on earth.

The pleasure-seekers are creating the popular demand that is sooner or later to make good roads necessary and obtainable. The more automobilists there are each year who in seeking the pleasures of cross-country riding learn for themselves the lesson of road improvement, the more effective will be the voice of motordom crying for the actual provision of this public need.

While France has always been regarded as the premier country for automobile racing, and the records have been held there for straight-

away events until the recent "spurts of speed" made at Ormond beach, American long ago went to the front in the track racing records, so that time of less than a mile a minute does not serve as an excitant to the average American. In Germany, the home of the Mercedes, the racing game so excited the stolid German that at the meet in Berlin last October the enthusiasm was so great that cinematograph pictures taken on Sunday afternoon were reproduced on canvas in the theaters the following afternoon. And yet some New York journalists think the German is slow!

Editor MOTOR AGE—I have five wives and forty-two children. Would you advise me to buy a motor car or a street car this spring? Stamped envelope enclosed for answer.—Anxious, Salt Lake City, Utah.  
Get an ambulance.—Ed.

Participants in the New York-Pittsburg endurance run need have no fear of snowstorms or cold weather during the automobile carnival at St. Louis next August. The weather is officially guaranteed to be warm there at that time.

The voice of the spring chicken will soon be heard in the land, and the hearse bonk-bunk of the automobilist as he toots his merry roundelay will revive the much-discussed question, "Why does a chicken cross the road?"

Cheer up, gentlemen; the days of anti-freezing mixture will soon be over and you can all go out into God's country, where the trees are and the road winds through a tangle of early blossoms.

The technical automobile editor of the esteemed New York Herald gravely announced last Sunday that Schwab's new automobile easily climbed steep hills at "one-third speed."

There will be a famine in photographic plates if the good roads committee of the Chicago Automobile Club attempts to take pictures of every mud hole in Chicago.

Now that the automobile tag catcher is put out of business by the courts, the dog catcher looms up on the horizon to disturb the peace and quiet of Chicago's homes.

The 'beautiful snow' poetry season positively closes this month, and then, according to Count Chassis de Garage, "motor poetry will come by the galore."

The man whose motor house is "full of no motors at all" should bestir himself if he wishes to do any motoring this spring. The early buyer gets the car.

Good roads enthusiasts from all over the country are in session at Erie, Pa., today and tomorrow. May their deliberations be productive of great good.

Kipling has discontinued his automobile poetry in the London Daily News. Amateur poets may now come forth with their motor poetry.

Should Senator Brownlow and his collaborators in the good roads movement be called "good highwaymen?"

## FRENCH MOTORISTS WIN

### After Thorough Discussion Parliament Permits Eliminating Race To Be Held on French Ardennes Course and Instructs Ministry To Issue Permit—Big Tour From Paris to Homburg

Nat since the French ministry and the chamber decided last May that no more automobile races were to be run in France has there been such excitement in the French automobile world as there was the last day of February. On that day a delegation consisting of Marquis de Dion, Count R. de Vogue, Abel Ballif, and the senators and deputies from Ardennes county visited Prime Minister Combes for the purpose of obtaining his permission to have the French elimination race held over the Ardennes circuit. After several of the distinguished members of the delegation had made addresses in favor of the race and pointed out that it was not only necessary to insure the success of the event in Germany, and after Marquis de Dion had explained that all the manufacturers interested would much rather have the event run on French territory than on foreign, the premier replied that only a vote of parliament would enable him to change his position concerning racing.

A hurried conference took place and for several hours the telephone played an important part in a call for a meeting of representatives of ten of the leading manufacturers for the next day at 11 o'clock.

On the appointed hour there were probably more prominent members of the automobile world gathered than ever before. Emil Mors, for the Mors company; Baron de Turekheim, for the de Dietrich company and also for the Turent-Mery company; A. Clement, for the Clement-Bayard company; M. Darraucq, for the Darraucq company; M. Serpollet, for the Gardner-Serpollet company; J. Caenod, for the Hotchkiss company; M. Brasier, for the Richard-Brasier company, and M. Gobron, for the Gobron-Brillie company answered the call. Many other members of different trade associations, clubs, and the press were on hand.

The majority of those present were of the opinion that it would be unwise to take the matter to parliament. The minority, headed by Marquis de Dion, claimed it was the only step to take, and the marquis finally converted most of those interested to his views. While a hurried conference of the automobile club's committee took place, a delegation consisting of Darraucq, Gobron and de Turekheim was received. The sports committee was urged to have the elimination race held over the roads of the Belgian Ardennes circuit. A long debate took place, during which word was received from Marquis de Dion that he was in parliament talking matters over with the different leaders.

About 5 o'clock de Dion ran into the conference room. "We win the day," he exclaimed. "The right and the left unite on the question; the center is entirely in accord with our views, while the socialists are our strongest supporters. The battle is won."

At 7 o'clock the president of the chamber announced that he had received the following resolution from Deputy A. Poulaun: "The chamber, considering that the French automobile industry is placed in the necessity of

choosing a circuit for its annual events, considering that the running of these events in foreign countries would be a severe blow to French interests, considering on the other hand that the circuit chosen by the interested parties in the Ardennes department offers all the conditions of security and guarantee as to the roads and the population, the chamber invites the government to give the permission for holding the circuit des Ardennes race."

Prime Minister Combes then said: "I make no opposition concerning this resolution, but I would like the chamber to express its intention, so that I may be relieved of responsibility. If the motion prevails I will take every imaginable precaution. After the Paris-Madrid race, I made up my mind that I would not allow races without the chamber's authority."

Marquis de Dion said: "The event is not arranged for the amusement of the public; it is a matter concerning the automobile industry and the 200,000 workmen whose living depends upon it. It would be disastrous to have this race run in foreign lands, as it would surely result in the public losing interest in the industry, which must be avoided at all cost." There were a few more speakers and then the resolution was carried.

It was the most complete victory automobile ever won in any parliament, for all of



the 500 or more members present, with a single exception, voted in favor of the resolution.

The Ardennes meeting has been set for May 20. The weighing of the cars will take place on the preceding day and on account of the great number of competitors, they will be started according to the numbers they draw.

The Automobile Club of France has arranged a tour to Homburg and return to Paris for the international event. It will last 15 days and is reserved to cars driven or accompanied by a member either of the Automobile Club of France or of the German Automobile Club. The itinerary of the excursion is the following: Start, June 13, Paris to Rheims; June 14, Rheims to Trier, Germany; June 15, Trier to Homburg; June 16, witness weighing of the racing machines for the race. Those who do not wish to witness this feature will make an excursion to Heidelberg, Weisbaden or Darmstadt; June 17, Gordon Bennett race; June 18, excursion over the course of the race and dinner at Homburg; June 19, race and test meeting at Frankfurt; June 20, elegance competition; June 21, Homburg to Nuremberg; June 22, stop in Nuremberg; June 23, Nuremberg to Stuttgart; June 24, Stuttgart to Baden; June 25, Baden to Trier; June 26, Trier to Freiburg; June 27, Freiburg to Nancy, France; June 28, Nancy to Paris.

The expenses for one person for the tour from Paris to Homburg, including stop-over in the latter town, will be as follows: Room with one bed, storage of car and transportation of baggage, \$146; same service but with

out storage, \$134; room with one bed, not including storage or baggage service, \$125; expenses for the complete tour, which means the trip both ways, will cost \$187 for a room with one bed, storage and baggage service; without the storage service, room with one bed, \$171; without either storage or baggage service, \$159; expenses for a mechanic, who will attend to the cars of three automobilists, \$25 for the trip to Homburg and \$39 for the complete excursion.

The Manx legislature passed a bill on March 15 permitting the English eliminating trials for the Gordon Bennett cup race to be held on the Isle of Man.

### ACTIVITY INDICATES SPRING

Chicago, March 15—A new Oriental smoking room has been fitted up by the Chicago Automobile Club in the rear of the secretary's office on the first floor. The room is hung with Oriental tapestry, fierce-looking swords and machetes decorate the wall, and luxurious couches woo the smoker to slumber after he has soothed his nerves with a fragrant cigar. Several changes have also been made in the arrangement of the furniture in the parlors and the ladies' reception room, thus giving the entire lower floor a much more inviting appearance.

The garage during the coming year will be under the supervision of a salaried superintendent. It is the intention of the club officials to run the garage for the benefit of club members only, and no profit is expected to be made. The superintendent will protect the members from all overcharges in repairs, and will see that machines left there will be properly cared for.

The Evanston Boat Club, which is thoroughly equipped for club purposes, has been secured as one of the out-of-town stations, and it will be the objective point for a number of club runs the coming season.

The addition of the country club feature makes membership the more valuable, as is shown by a growing roster.

### MADE EARLY CENTURY

Cleveland, O., March 14—Harry S. Moore, agent for the Orient buckboard, is greatly elated over a rather remarkable run made yesterday by Frank Adams and Gail Crawford in the former's buckboard. The gentlemen claim to have made the first century run of the season for an Ohio automobilist and their trip was certainly a remarkable demonstration of the standing up qualities of this popular little machine. The route was over the famous century course of the bicycle days—Cleveland to Geneva and return, and despite very bad condition of the roads the machine returned to Cleveland in good shape, not a breakdown occurring during the trip, though the roads at times were so bad that it was necessary to haul the machine through mud up to the axles.

The start was made at 7 o'clock, standard time, and it was just 10:20 at night when the two automobilists, tired and mud stained, pulled into town again. A peculiar circumstance in connection with the run is that identically the same time was made on both the outgoing and incoming trip. It took just 7 hours and 40 minutes to make the 50 miles to Geneva and the return trip was made in like time. Considering the condition of the roads the time was as good as could well be expected.



# VIRGINIA BEACH DISAPPOINTS



MOTOR AGE

PCHING



**BOARD** Old Dominion Line steamship *Monroe*, homeward bound from Norfolk and Virginia Beach, March 14—Virginia Beach has been duly explored by a large and noteworthy investigating committee of experts, and it seems to be only hoping against hope

to give any other verdict than that having been duly tried out it has been found wanting. There is still a lingering hankering horn of a taste of southern hospitality as meted out by the Old Dominion Steamship Line, the Princess Anne hotel management and the Virginia Beach Automobile Club to go back and spy out the beautiful pine woods-backed and ocean-washed stretch of beach once more. In fact, there is every chance that there may be another pilgrimage a month or two hence, in the hope and with some expectation that after all the Virginia Beach people have a good and available thing in the way of a straightaway speedway in their 80 miles of stretch of sand from the Princess Anne hotel to Oregon Inlet down North Carolina way.

Yesterday morning five four-passenger laden touring cars and a racing machine of national repute made trial of the beach. When 5 miles of it south from the Princess Anne hotel had been covered the ride came to an end. Why? Of that later.

"It won't do," was the prompt and unanimous verdict of experts and laymen.

Hardly more than a plain, ordinary, every day beach such as one might find, if not almost nowhere at least at many points along the Atlantic coast, was found. It was possible to drive teams over it and, of course, automobiles, too, but to attain top speed over it to any continuous extent, no.

As the explorers found it yesterday, the high water caused by a rush of northeast wind, had left even at low tide but 50 feet of riding path. Even the quarter-mile stretches of level were rolling in spots. There were

quite frequent bits of sand, imbedded wreckage and here and there knolls of clay protruded above the surface. There were soft spots, too, which caused all the cars to disgorge their passengers several times to lighten the load and provide a corps of pushers before the transit of them could be made.

The trial trip was brought to a sudden end by a catastrophe that came near to Harlan W. Whipple's losing to sight and memory dear his much prized 40-horse power Mercedes.

The president of the American Automobile Association had taken the lead by a mile of the procession of trial cars. Arthur Jervis, Nathan Lazarnick and Charley Donahue were in the car with Mr. Whipple. The trusty Mercedes had passed the wreck of the *big ship* Henry K. Hyde, trenched last month 4 miles below the hotel and reached a point a mile farther down the coast known as Dam's Neck Mills, just below Life Saving Station No. 3, where without warning it plunged into a stretch of coarse red sand near the water's edge.

The car, which was going at a 20-mile an hour clip, gave a plunge oceanward and in its struggles rocked from side to side. It finally stuck fast with its ocean side wheels in water. The crew leaped out and pushed while Mr. Whipple reversed his engine. No progress,

however, was made. The machine was stuck fast and sinking very rapidly in the quicksand. Arms were waved to Augustus Post, who was half a mile up the beach in his White touring car, with Alfred Reeves, Charles S. Wells and Edwin Levick as passengers. Post put on all speed and was soon alongside. Just then a team happened to be passing and by good luck had a rope and shovel aboard. The long-distance tourist at once took charge of the rescue party. Boards were found on the beach and placed beneath the rut dug by a shovel to prevent the machine's sinking farther. By this time M. J. Seymour had come up with Alexander Fisher's car, with S. M. Butler, E. T. Birdsell and A. G. Batchelder aboard. This gave twelve men and all were needed. Wells and Seymour, two giants, waded into the water and lifted while the other ten, aided by the engine, yanked on the rope to the time of Post's "Yo-heave-O!"

The Mercedes was finally gotten out. All thought of further exploration was abandoned. Mr. Whipple drove back and notified Joe Tracy, who was driving Frank N. Nutt's Haynes-Apperson, with F. Ed Spooner, Louis R. Smith and a *Moroc* *Age* correspondent aboard, that it was all off for the day. Carey P. Weston, of Norfolk, who had a party of Virginia East Coast Automobile Association members with him in his Cadillac tonneau, was also stopped. Both of the last named cars had been having their own troubles pushing through the soft spots.

On the way back to the hotel F. A. La Roche was encountered in his Darracq "Blue Streak," with C. H. Gillette as a passenger, tearing down the beach at top speed. He had been timed a quarter mile at a 60-second rate. Mr. La Roche had been duly warned by Mr. Whipple of the quicksand below the wreck and returned without mishap.

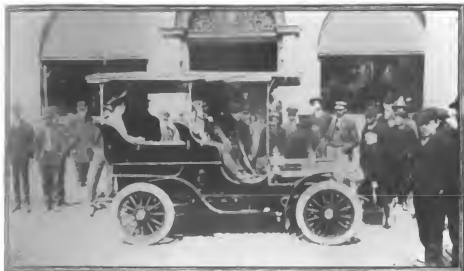
The approach to the beach is bad. This necessitated the building of a makeshift runway down from the board walk with loose earth at the bottom to carry the cars to the hard sand near the water's edge. All hands had to turn to and push, and haul on a rope, to get the cars through the soft dirt, whence there was a tough climb of 30 feet up the steep runway. It took all the power of the engines and the pushers and pullers to get them up the incline. Much good natured badinage followed among the drivers as to which car had won the impromptu hill climbing contest.

Returning from the test the cars met hundreds of people who had come in by train and trolley from Norfolk, walking down the beach to witness the marvelous bursts of speed by the great automotometers that the local papers



MOTOR AGE

PCHING



PLANNING

had been promising them for several days in black scare-line headings. All along down the beach were knots of natives from the back country and groups of the over present pick animies. The board walk, too, was lined with cottagers and hotel guests. To all these local folk a racer or a modern touring car is somewhat of a wonder, as there are but twelve automobiles in Norfolk and all of them are of the rumbust or small tonneau type.

The trials finished about luncheon time. Following that all hands interested repaired to the smoking room of the Princess Anne, where coffee and cigars were served and the beach and the whole situation thoroughly and frankly discussed.

Alfred N. Chandler, of Philadelphia, president of the Virginia Beach Automobile Club, a local property owner, was the first to speak. "You have not seen the stretch of beach we offer you as a race course," said he. "If you will go just below the point you reached this morning you will begin to get to a beach which though not equal to Ormond, will make a most available race course for you, especially when you consider the distance to Florida and the expense of getting there. You did not go below the 5-mile limit, of which we made no promises. You did not get to the stretch of beach which we told you was desirable for a race course. With the east wind that has prevailed for over a week the tide will set run out, and so you find but a narrow beach, instead of the broad beach that is normal under average conditions. March is the most trying month of all the year. Rindien changes take place in a short time on this coast. We urge the automobile club and the A. A. A. to send a committee to investigate the beach under not favorable but average conditions."

R. C. Byrd, of Norfolk, manager of the Virginia Beach Development Co., was the next speaker. He said in part: "I have been driving up and down this beach for 20 years and know what a fine driveway it is and how good an automobile speedway it will prove. In all these years I have not seen such abnormal conditions as exist to-day. The seepage from the land has backed-up and made these soft spots which you call quicksand. We have had a northeast wind for the past 10 days. The rainfall and snowfall has been excessive this winter. The seepage in consequence has caused soft spots. The tide from the ocean has backed up and so comes up through the

beach. The average condition is level and hard. There is a natural speedway averaging 100 feet in width extending along the coast for 80 miles from Cape Henry Smith to Oregon Inlet. Between the middle of April and the first of June you will find absolutely none of these soft spots."

James S. Groves, manager of the Princess Anne Hotel, said: "It was against my advice that you people came here now. This is the very worst time to see the beach, but still Mr. Strass brought you here at this time. From the middle of May to the first of December it is as hard and smooth a track as there is in this country. This is the worst winter I have ever seen here and the beach has naturally suffered. The government electrical expert in charge of the telephone and telegraph lines along this part of the coast will tell you of the beach."

W. Easby Smith, the government official referred to, said: "I am well acquainted with the coast from Cape Cod to Cape Hatteras. My district embraces the coast from Cape Henry to Oregon Inlet. From here to Life Saving Station No. 10 is 60 miles. I have never seen a better beach than this stretch. But to-day was a very bad day. I have driven from Virginia Beach to Station No. 9, a dis-

tance of 42 miles, with one horse in one tide. From Station No. 6 on down to Oregon Inlet the available driving beach is from 400 to 500 feet wide. I have been talking with the stations down the coast by 'phone to-day and they tell me that below Little Island the beach is hard and in fine condition. The soft sand does not appear on this beach except after a storm. From May to October these soft spots are all covered by hard sand. The whole country is soaked now, though, and the ocean backs up and makes the beach uneven and soft in spots."

Herman Drinkwater, a local resident, said that James L. Breese made a run over the beach on November 18 last in his Mercedes and covered 45 miles in about 50 minutes and made the return trip in an hour and a half. Mr. Breese had got stuck in the sand once, but that came from his bringing his car to a standstill near the water's edge.

S. M. Butler, secretary of the A. C. A. and a member of the A. A. A. racing board, said frankly that the beach so far as examined was unfit for racing or speeding under present conditions, whatever further investigation at a more favorable season might disclose. He would be glad if a later examination should prove it to be all that the Virginia Beach gentlemen claimed for it as a race course.

"We should give the beach a further trial," said F. A. La Roche. "I shall be glad to bring down a racer or two and a touring car whenever informed that the beach is in its normal condition and I am sure Mr. Whipple will be willing to bring a car, too. We all would like to see the beach under favorable conditions."

Charles R. Ryan, general manager of the Seaboard Air Line, said he thought the automobilists might well give the beach another trial.

Mr. Chandler declared that his club had no thought of setting up any opposition to Ormond, but merely to offer an available course for racing in the early spring or late autumn.

George A. Frick, of Norfolk, said he was confident that a race meet might be scheduled with safety any time from the first of May to October.

H. H. Trice, a member of the executive



PREPARING



MOTOR AGE

PEELING.

committee of the Virginia East Coast Automobile Association, which is made up of Norfolk automobilists and was the first to be formed for the purpose of promoting racing on the beach, said that his organization would gladly co-operate with the Virginia Beach Automobile Club in urging further investigation of the beach and promoting the proposed race meet.

The inception of the idea of the availability of Virginia Beach as a speedway for automobiles must be credited to Lee Straus, a Virginian, until recently connected with the American Darracq Automobile Co. Mr. Straus visited Norfolk just after the New York automobile show and interested the local automobilists in the project to an extent that the Virginia East Coast Automobile Association was formed. In his enthusiasm Mr. Straus desired that the A. C. A. and A. A. A. racing officials should be immediately invited to visit the beach. The Norfolk clubmen demurred to this until after they should have tried out the beach by some local races. It is also said that the Norfolk men were not willing to accede to certain demands of Mr. Straus as to his share in the management of the proposed meet. Mr. Straus was ambitious that the American team tests should take place at Virginia Beach instead of at Ormond, and that preliminaries for a great meet on the beach

in May should at once be begun. This required immediate inspection of the beach. Mr. Straus then turned to the Virginia Beach Development Co. people and the hotel and property owners to put the scheme through. The result was the formation of the Virginia Beach Automobile Club. These people and Mr. Straus were hustlers and found prompt backers in the steamship, railroad and hotel people. The outcome of it all was that the present party of racing officials, owners of cars and newspaper men were invited to make the trip and accept.

Accordingly the exploring expedition set sail from New York last Friday afternoon on the Monroe to make the investigation as the guests of the Old Dominion Steamship Co., the Norfolk & Southern Railroad, the Monticello hotel of Norfolk and the Princess Anne hotel of Virginia Beach.

The official jury of inspection was made up of S. M. Butler, representing the A. C. A. racing committee and the A. A. A. racing board and the following A. A. A. officials on behalf of that organization: Harlan W. Whipple, president; C. H. Gillette, secretary; Augustus Post, chairman of the touring committee; and E. T. Birdsall, a member of the racing board technical advisory committee.

To make the test F. A. La Roche took down his Darracq Blue Streak racer. President Whip-

ple his 40-horsepower Mercedes and Mr. Post his White touring car. Alexander Fischer, importer of the Martini, sent down a touring car in charge of Mr. J. Seymour for the use of Secretary Butler and the officials, and Frank N. Nutt, of Kokomo, Ind., brought with him a Haynes-Apperson touring car.

The newspaper men on the expedition were: A. G. Bacheider, of Motor and Hearst's American; Alfred Reeves and Louis R. Smith, of the Automobile; James P. Holland, of Automobile Topics; F. Ed. Spooner, of the World and Globe; C. S. Wells, of the Globe; Arthur N. Jervis, of the Sun and Motor World, John Coulter, of the Evening Mail, and John C. Wetmore and Nathan Lazaruk, of Motor Aoz. Other members of the party were Joe Tracy, E. P. Guenther, and J. M. Davis.

Lee Straus accompanied the party as representative of the hosts. It was altogether a notable expedition of discovery well fitted to pass judgment on the racing qualities of the new course and well able to give it due publicity should the discovery prove a big find.

As might be expected the voyagers had a merry time of it aboard the good ship Monroe after the manner of their kind. During the evening a heavy snowstorm was encountered. Those who left the round tables for a walk on deck "for luck" reported that 3 inches of



MOTOR AGE

POST 1913

snow had fallen. Captain Hulphears, Chief Engineer Charleston, Purser Guilledeau, and Steward Per Lee were all attention and did not belie the reputation of the Old Dominion for hospitality.

In the morning the sun came out so bright and warm that overcoats were discarded and one brass man ventured to don a new spring suit. The photographers had a busy time of it snapping groups on the deck, and as Hampton roads was entered, taking shots of the new battleship the Cramps were trying out for Turkey, the historic rip raps, Fortress Monroe and the big Chamberlin hotel at Old Point Comfort, as well as the Marine hospital and various interesting objects on the Elizabeth river.

An hour later the Monroe docked at Norfolk, where Messrs. Chandler, Stokes, Reinhard, Lent, Weston, Royster and Consoloe met the party. Busses soon brought the party to the really elegant Monticello hotel, easily the peer of the Hollenden of Cleveland, the Inquiries of Buffalo and such caravansaries. That Mine Host "Syl" Stokes made the boys feel at home at once in true Virginia style.

The hour before luncheon was devoted to walks about town to view the old church, the residences of the local F. F. V. aristocracy, the magnificent seven-story brick Virginia



MOTOR AGE

PEELING.



Club almost completed, and other objects of interest in the Gate City of the south, where fifteen railroad lines have their termini.

After a jolly, informal, chatty luncheon had been dispatched, it was time to hurry to the Norfolk & Southern station, where the train for Virginia Beach was taken at 3 o'clock. The automobiles were placed on flat cars, which were coupled to the train. There is a fine shell road for seven of the sixteen miles to Virginia Beach. Manager Byrd, of the Virginia Beach Development Co., says their road will be continued to the beach the coming summer. Virginia Beach is 35 minutes from Norfolk by train and an hour by trolley.

Mine Host Groves, of the Princess Anne, met his guests at the station and greeted them in hearty southern fashion.

Virginia Beach is made up of the big up-to-date Princess Anne hotel, several smaller hotels and boarding houses and a score of cottages. It has an aerial railway and other attractions for the day excursionist from Norfolk, whose chief pleasure resort it is. A long board walk extends along the ocean front. To the rear of the town are pine woods, and there are golf links, of course. The ocean view and the beach are fine. Virginia Beach is a popular resort for northerners in the early



MOTOR AGE

PARLITTING

beach shall prove available for the big tournament proposed in May.

The officers of the Virginia Beach Automobile Club are: Alfred N. Chandler, Philadelphia, president; Sylvanus Stokes, Norfolk, first vice-president; Thomas G. Leath, Richmond, second vice-president; Lee Straus, New York, secretary-treasurer; C. E. Lent, Philadelphia; H. M. Reinhard, Richmond; John Howard, New York, and Charles H. Consolvo, Norfolk, directors.

The Virginia East Coast Automobile Association is made up of Norfolk automobilists. Its officers are: W. J. Royster, president; J. Roy Collins, secretary-treasurer; Carey P. Weston, chairman of racing committee, and H. H. Trice, Dr. W. J. Adams and Dr. Lomas Gwathmey, executive committee. Both organizations have applied for membership in the A. A. A.

The explorers left Virginia Beach yesterday afternoon and took the steamship Monroe for New York the same evening. The Old Dominion Line having ordered an extra voyage of the Monroe on Sunday night, when no boat leaves regularly, to accommodate them. They had the steamer pretty much to themselves. On the homeward bound voyage there was a renewal of the forms of entertainment that made the onward trip pass so pleasantly. The

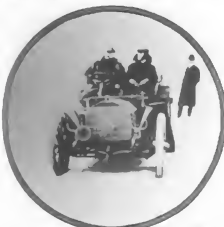
Monroe is now making its way slowly up New York bay through a thick snowstorm. All hands are profuse in their gratitude to their entertainers.

#### CRYSTAL PALACE SHOW STATISTICS

At the Crystal Palace show in London this month there were 577 cars exhibited, of which 422 were complete cars shown by 101 exhibitors. These were subdivided as follows: Light and heavy cars, 218; cars with detachable covers, 74; with permanent covers, 48; voiturettes, 74; racing cars, 4; motorettes, etc., 14; omnibuses, 9; lorries and vans, 24; tractors, 15; chassis, 97.

These cars were driven in four ways, as follows: Gasoline, 525; electricity, 17; steam, 33; petroleum, 2.

In price there were seven cars, or 1.7 per cent, which cost not over \$500; thirty-eight cars, or 9 per cent, that cost from \$500 to \$750; forty-three cars, or 10 per cent, that cost from \$750 to \$1,000; sixty-eight cars, or 16 per cent, that cost from \$1,000 to \$1,750; eighty-five cars, or 20 per cent, that cost from \$1,750 to \$2,500; ninety-nine cars, or 23 per cent, that cost from \$2,500 to \$3,500; sixty-seven cars, or 15 per cent, that cost from \$3,500 to \$5,000; fifteen cars, or 4 per cent, that cost over \$5,000.



MOTOR AGE

PAPADAKIS

spring and late autumn and for southerners in the summer also.

Should the beach turn out to be available for automobile racing the advantages of its location through its large neighboring population, its nearness to Washington, Richmond and Baltimore and its easy access from Newport by boat or rail cannot be disputed. In fact, it has everything to be desired. It is to be hoped that it will be proved to have a speedway beach also.

A pavilion near the beach was utilized as a garage. Here the entire population inspected the cars and told one another of the wonders of La Roche's Darracq racer and Whipple's great Mercedes flyer. When they had finished there were few laurels left for Vanderbilt's brow. The evening was passed pleasantly by dancing, swapping lies and card parties. The electric lights were turned off at midnight. This precipitated a last round and cash settlements by candle light, but it insured a good long night's rest for the tired voyagers.

The story of the trials of the beach has been told hereinbefore. So it may be added a statement of the probability that the two rival associations will work in harmony from now on if they do not consolidate and form one body, as would seem desirable if the



MOTOR AGE

PUZZLING



## FOUR OFFICIAL ROUTES

### Tourists to the St. Louis Fair Will Have Their Choice of Several Roads—Gotham News

New York, March 14—Augustus A. Post, chairman of the St. Louis tour committee of the American Automobile Association, announces that four official routes have been chosen from the east for the simultaneous system of tours to the St. Louis fair, beginning late in July and concluding in the exposition grounds on August 10. Other routes, of course, may be chosen by individual tourists, but the A. A. A. will not undertake to make arrangements en route except by the lines officially designated.

The official tours will be by what are commonly termed the New York central route, the endurance run route, the south Pennsylvania route and the national highway. The first will be by way of Albany, Utica, Syracuse, Buffalo, Erie, Cleveland, Toledo, Waterloo, Chicago, Bloomington and Alton. Tourists from New York and Boston traveling by this route will meet at Albany. The second will be along the line of the last endurance run as far as Buffalo, where it will join the first route. It will follow the west bank of the Hudson to Kingston, and thence west over the Catskill Mountains to Unadilla, Binghamton and Elmira to Buffalo.

The south Pennsylvania route will start properly at Philadelphia, and will be via Bedford, Conneville, Pittsburgh and Youngstown, to Cleveland, where it will join the main route. The route by the national highway, from Baltimore and Washington, may be diverted north at Gettysburg to join the Pennsylvania route at Conneville or Pittsburgh.

Up to date nothing has been decided about the country club house scheme of the A. C. A., though the plan is generally favored by the members.

Recently circulars of inquiry were sent to 450 members of the club by T. W. Hilliard, chairman of the country club committee, and 240 replies have been received. Members were asked whether they were in favor of a country club and their opinion as to its location—in New Jersey, Long Island or along the Sound, somewhere near Rye.

Of the responses all were in favor of the country club idea. Some preferred New Jersey for the location and a few more the region on the north shore of the Sound, but the greater majority signified Long Island as their choice. A synopsis of the replies was presented the officers of the club and the committee recommended that the secretary be instructed to seek quarters in some existing club on Long Island.

At the state capital last week, in arguing for the \$2,000,000 appropriation for good roads before the assembly ways and means committee the executive committee of the good roads association of the state made an attack on Governor Odell, who does not believe that more than \$1,000,000 should be appropriated this year or road improvement.

The representatives of the association before the committee were W. Pierpont White, of Oneida county; George Mosher, of Orange; Henry McNamee, of Ulster; John Gieb, of Saratog; Joseph H. Brownell, of Broome; Ira P. Chubb, of Ontario, and Arthur Warren,

of Monroe. They distributed a statement among the members of the committee, reading in part as follows:

"When the delegates to the fifth annual convention of the board of supervisors in the interest of highway improvement called on Governor Odell and told him that the counties and towns had petitioned for 4,500 miles of roads and that last year twenty-seven counties had appropriated \$2,007,512 as their half of the cost of constructing 470 miles of roads, and asked that the state appropriate a like amount, the governor said that \$2,000,000 could not be appropriated without a return to direct taxation, and that the plan to bond the state for road improvement seemed to him premature.

"Now Governor Odell is willing to bond the state for widening and deepening the Erie canal so that the produce raised by the western farmer may be brought into this state in competition with the produce raised by the New York farmer, and although some years ago he was in favor of bonding the state for roads he now thinks that it is premature. He has evidently changed his mind and is opposed to the interests of the farmers of New York state."

The senate has passed the Armstrong wide tire bill by a vote of twenty-nine to two. The measure provides for 3-inch tires on all wagons or vehicles built to carry a weight of 1,500 pounds or upward, sold or kept for sale after January 1, 1905.

President Scarratt explained to the A. C. A. members the two automobile bills now pending before the legislature. "There are two bills," said he, "the Coeks and the Hill. After various conferences they have been adjusted so that they are now practically the same, and are expected to pass shortly. The speed limit in built up portions of cities has been raised from 8 to 10 miles an hour; on suburban roads where the houses are more than 100 feet apart, it is 15 miles, and 20 miles in the open country. It is mandatory to put up warning signs if the drivers approach to built up sections not farther out than half a mile.

"This, however, does not restrict the speed to 10 miles in sections not built up. Chauffeurs must take out licenses and wear badges. The penalties for minor offenses, such as light out, have been lessened. Fines are now set at \$50 maximum, with a minimum of \$1, as against the \$25 minimum formerly in vogue."

### PROVIDENCE IN LINE

An automobile school will be started in Providence, R. I., this month by the Young Men's Christian Association of that city. The school will be conducted along the same lines as the one now in existence in Boston, and besides the lectures and practical talks there will be demonstrations at the several garages around town. If arrangements can be completed the first lecture will be given Monday evening, March 21, and will afterward be given on Monday, Tuesday and Friday evenings of each week. An advisory committee, consisting of Dr. J. A. Chase, president of the Rhode Island Automobile Club; H. H. Rice, C. Prescott Knight, Darwin Allen, Nelson S. Davis, Harry G. Martin, L. P. N. Baldwin, A. S. Hitchcock and W. W. Whitten has been appointed, and it is expected that the lectures and instruction, which will be given by Dr. W. E. Decker and Parker Kemble, of Boston, will commence the course.

## PROUD OF BUFFALO SHOW

### Trade Men Declare It the Banner Local Affair—Record Breaking Attendance and Sales

Buffalo, N. Y., March 14—"The Buffalo automobile show, which closed Saturday evening, will go down in history as by far the best local show ever held in America, both as regards decoration, electric effects and business. In fact, the view from the stage, forgetting the galleries, was more impressive than the last national show at Madison Square garden," said a prominent trade visitor yesterday. Every car of repute of American make was there and all will be handled by Buffalo dealers; in fact, the only two cars at the show that will not be represented in Buffalo were the two French cars, the Darracq and Clement, but it is quite possible that Mr. Jaynes will handle the former.

It is estimated that 300 sales were actually made during the week, but of course it will never be known just how many cars were actually sold, as claims are as a rule exaggerated. It is, however, a fact that there was a heavy business and there was not a single exhibitor that was not satisfied.

The attendance for the week, outside of the free paper, is given out as over 55,000. There was not a hitch or complaint of any description and the Buffalo Automobile Club and the Buffalo Automobile Trade Association, under whose joint auspices the show was held, together with F. J. Wagner and D. H. Lewis, joint managers, have every reason to feel gratified.

A. H. Knoll, vice-president of the club and chairman of the show committee, and F. J. Wagner, secretary of the club, enlisted over one hundred new members. The way the daily papers boomed the show was a revelation to not only Buffalonians but also visiting trade men. It is perhaps worthy of mention that on Friday and Saturday there was grand opera at the Teck theatre, which proved a treat from a point of attendance and the cause has been attributed to the counter attraction, the automobile show.

The Courier runabout secured a little space in John Gibson's exhibit about the middle of the week and an agency deal was made with George B. Johnson, who is a new comer in the retail field, but one who is well known to the local trade on account of his long connection in the bicycle business. A new concern has been incorporated under the style of the Buffalo Motor Car Co., with a capital of \$25,000, to make motors and automobile machinery. The directors are F. I. Alliger, mayor of Tonawanda; Fred Wendo and William Lutz of this city, the latter being the manager. It has leased half of Mr. Cramer's garage and will be located there about the first of April. The announcement of this new incorporation was only made when it was learned that there was another concern by the same name, and the latter immediately served an injunction, and so as to avoid trouble the new concern changed its name to the Bison Motor Co. and will handle Pope-Toledo cars for Buffalo and vicinity.

W. U. Watson, who recently took the agency for the Wayne car, has taken in a partner and the business will hereafter be conducted under the title of Watson and Dennist.

Another new comer in the trade in Buffalo is H. L. Winter, who will have charge of the Franklin in connection with the Centaur Motor Co. He is an old man in the business, having previously had charge of the Olds testing department and also charge of the American Automobile Storage Co.'s place in New York city.

The Automobile club membership is now over 450, which makes it the largest club of its kind in any city in the country, which is something that Buffalo should and does feel proud of. The club has secured a sanction to hold a race meet next May, and W. J. Morgan, who was in town the latter part of the week, says Jarrott and Edge, the English automobile drivers, are coming over for racing purposes and will doubtless be able to induce them to get here in time for the Buffalo meet. It will be held on the new Kenilworth track, which it is claimed is one of the best mile tracks in the country.

In 1901 there was an automobile race meet at Fort Erie, just across the Niagara river, but on account of lack of interest in the sport and the time it took to get to the track, it was not a success, but with the enthusiasm that there now is here in matters automobiling, the meet will unquestionably be a success.

#### INTERESTS AUTOMOBILE MAKERS

American automobile companies will be interested in a bill introduced in congress by Representative Wade, of Iowa, providing for reciprocal free trade with Canada. It provides in effect that if Canada shall, at any time within 2 years from the passage of the bill, enact such legislation as will admit free of duty to Canada, all articles produced or manufactured in the United States, then the President of the United States shall forthwith make proclamation thereof. Six months after such proclamation all articles produced or manufactured in Canada shall be admitted into the United States free of duty.

#### CLAIM HARDSHIP

The numerous owners of motor boats and about Ogdenburg, N. Y., are about to take concerted action regarding the bill of Representative C. H. Groveson, which, if passed, will compel all boats to carry licensed pilots and engineers. There are many boats in the vicinity of Ogdenburg and their owners feel that the proposed bill, if passed, would not only be a hardship to them, but would injure the motor and hull building trades, both of which are promising industries in that section.

#### MADAME IS BARRED

The Automobile Club of France has decided that it will not permit women to compete in the eliminating trials for the Gordon Bennett cup race. Madame du Gast is very indignant at this action as she says the decree is aimed at her. The trials will be held May 20.

#### MONTAGU VINDICATED

The reform committee of the Automobile Club of Great Britain and Ireland won a decisive victory at the election last week, electing forty-nine out of fifty candidates. The result of the election is to vindicate the Hon. John Scott Montagu in his course of action in calling attention to the maladministration of the club's affairs. Nearly all the members who have been mainly responsible for the methods pursued during the last year have been removed from the executive board.

## STUDYING AUTOMOBILES

### Syracuse People Educating Themselves on Motor Cars by Means of Discussion Meetings

Syracuse, N. Y., March 14—The members of the Technology Club of Syracuse, organized a month ago with a membership comprising manufacturers, engineers and chemists, met Wednesday night and heard a lengthy discussion on the subject of automobiles. A general presentation of the subject was made by John Wilkinson, who told of the machines and their construction. At the conclusion of his remarks several questions were propounded. One was as to the greatest item of expense in maintaining an automobile. He replied that he thought it was the tires. These, he said, for a machine weighing 1,000 pounds would cost at the rate of 1 cent per mile; for a 2,000-pound machine, 2 cents a mile; for a 3,000-pound machine, 3 cents per mile. Dean William Kent, of the engineering department of Syracuse university, addressed the members on "Steam Boilers for Automobiles," and H. J. Leighton spoke on "Gasoline Engines." A general discussion of automobiles and their running followed. Arthur Parsons, a well known patent attorney, told of the success of Syracuse men in perfecting gasoline automobiles and gasoline lunches. He said the men of Syracuse had been more successful than manufacturers in any other city, calling attention to the fact that Mr. Leighton had constructed the fastest gasoline launch in this or any other country.

The automobile which is to be given away by Auburn Lodge of Elks is destined to see some hard usage if it goes to Syracuse Lodge No. 31. The members of the local lodge have agreed that if they get the machine suitable quarters will be provided for it somewhere downtown and a man hired to run it. The machine will then be at the disposal of several hundred members of the lodge any time they want it. The lodge officers anticipate that under these circumstances the automobile will last not over a month at the outside, but during that time they figure it will have worked wonders for automobile manufacturers, claiming that every one who has ridden in it will want a machine of his own, and in case of being unable to purchase one will prevail upon the members of the lodge to purchase as many as are necessary for the convenience of all who desire to ride.

The New Process Bawdise Co., which manufactures gears, has begun work on the construction of its new factory on the salt lands. The main building is to be 170 by 40 feet, and in the rear there will be a large foundry and engine house.

The stockholders of the Cornwell company at a special meeting decided to alter the certificate of incorporation so as to permit it to sell, store and repair automobiles. The capital stock will also be increased from \$20,000 to \$50,000.

#### RICHARD'S NARROW ESCAPE

One Richard H. Welles, of Kenosha, Wis., much known in connection with Solar lamps for automobiles, bicycles, buggies, coal wagons, drays, motor boats, ambulances and police patrols, is about to present William K. Vanderbilt, Jr., with seven Solar searchlights—and

thereby hangs a tale. At the New York show Richard reflected that business was pretty good and volunteered to donate a searchlight to record breakers at the Florida beach tournament to the tune of one lamp for every record broken. When the officials of the meet began to make up the summary of performances it was found that about fifty worlds' records had been broken and Dick's sporting blood was tested with a wire to that effect. A return message proved that he would stick to his bargain. It then developed later, however, that Vanderbilt and the other record breakers could not claim so many lamps, for intermediate times had not been taken in record breaking runs. Hence the requisition made of Mr. Welles by the Florida East Coast Automobile Association a few days ago was for only thirteen lamps, seven of which are to go to Vanderbilt and the other six one each to Charles Basle, Louis S. Ross, W. J. Hastings, M. G. Bernin and H. L. Bowden.

#### BRITISH AUTOMOBILE INSURANCE

A consular report states that insurance, from the automobilists' point of view, has become a matter of importance on account of the damage done to cars through carelessness on the part of others, and because of the claims which may be made by vehicles, travelers, and others who may be able to prove injury to property or persons at the hand of the motorist. This fact has prompted one of the English automobile papers to make arrangements with a British insurance company to issue comprehensive policies "drafted sympathetically and by those who understand the requirements of motorists." It is believed that the majority of insurers will be willing to pay any small loss incurred and insure with the idea of protecting themselves from any serious claims, and therefore a 50 per cent reduction is made if the insurer will carry the first \$50 of any and every claim, loss, or damage.

#### HELD SKIDDING TESTS

A series of trials with anti-skid devices were held under the auspices of the Automobile Club of Seine-et-Oise, France, from February 24 to 25 inclusive. Of the thirty-four cars entered, twenty-six took part in the various events, which included a hill-climbing competition on the Piarde hill; a 500 miles road run, divided into four stages, and experiments upon paved, macadamized and muddy roads. German, English and Belgian devices were tried, but the majority were of French make. There was little difference in the distance required for stopping the cars, whether equipped with an anti-skid device or without, and in a few instances the car with the attachment required more time for stopping. Four minutes was the least time required to affix an attachment, while 65 minutes was the greatest time needed. Some of the attachments were found to have excellent feature.

#### ANOTHER OHIO BILL

Cleveland, O., March 14—Another automobile bill has been introduced before the Ohio legislature. The measure is sponsored by Representative Smith of Wyandotte county and requires owners of automobiles to register with the secretary of state, fee \$1; the secretary of state to give owner a number to be in figures not less than 3 inches high, and placed in a conspicuous part of the machine.



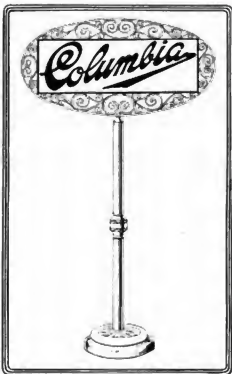
**A**S MEMBERS of one great family—the American family—will the 125 cars of different patterns of the members of the National Association of Automobile Manufacturers be exhibited at the St. Louis world's fair, the Louisiana Purchase exposition, which opens April 30 and closes December 1. Thirty-seven members of the association have arranged for space in the collective exhibit to be made under the direction of the association. Twenty-eight of them are makers of automobiles; the others of parts and accessories. These exhibits are all grouped in one section of the big transportation building and so far as the general constructive plan is concerned will represent one mammoth display.

The space allotted to members of the N. A. A. M. is divided by the regular aisles which divide the building into sections. Further than these aisles there are no divisions. The collective display is a unit and distinguished from the displays of American automobile manufacturers who are not members of the National Association of Automobile Manufacturers and from those of foreign manufacturers. Needless to say it occupies the major portion of the entire space devoted to automobiles.

The transportation building is the second largest single building of the fair. It is 1,300 feet long over all and about 600 feet wide. It stands on the north side of the 1240-acre grounds of the fair, right at one of the main entrances and alongside of a branch of the intramural railway. It is a spreading, low structure with the main entrances in the ends and with several smaller entrances in each side. The automobile section is in the northeast corner and the side entrances from this portion of the building lead directly to the rear entrances of the streets of Chicago, one of the prominent attractions of the "Pike," which at the St. Louis fair is the counterpart of the mid-way that made Chicago famous.

The center of the transportation building is open

to the exhibits of railway rolling stock on tracks running lengthwise of the structure. The exact location and extent of the collective exhibit of the members of the National Association of Automobile Manufacturers is indicated by the shading in the plan view of the entire building. The exhibits of those American manufacturers who do not be-



ONE OF THE SIGNS

long to the association are directly adjacent at the west, while the display of the European automobile manufacturers is along the east end of the building at the south of the N. A. A. M. display.

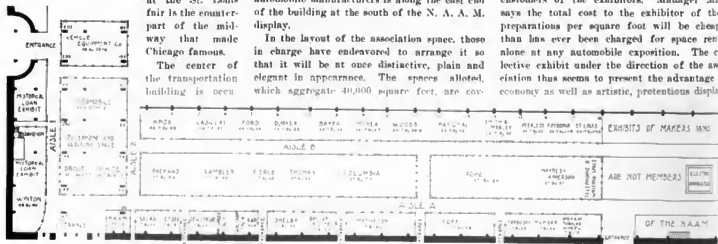
In the layout of the association space, those in charge have endeavored to arrange it so that it will be at once distinctive, plain and elegant in appearance. The spaces allotted, which aggregate 40,000 square feet, are cov-

ered by continuous platforms, 6 inches high and made of Georgia pine, which is nicely stained and varnished. At each of the principal corners there is being erected a group of five fluted columns, upon a unit base and topped with globes. The height from the platform to the top is 11 feet.

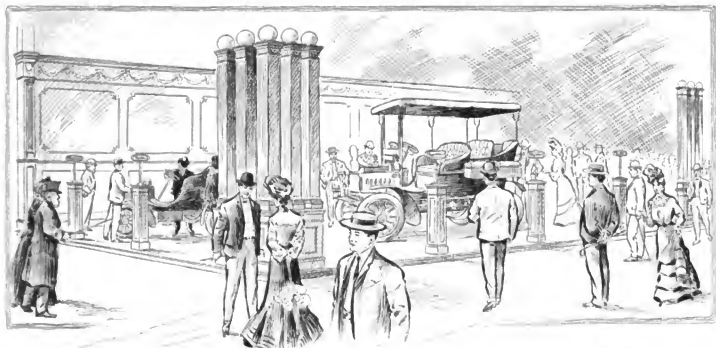
At intervals of from 25 to 28 feet along the edges of the platforms will be groups of three similar columns, while between these at intervals of about 8 feet will be short single pillars, upon each of which will be placed one of the uniform series of signs that will be the only signs used to designate the displays. These signs will be entirely of polished and lacquered brass and will be 2 feet 6 inches high, so that the total height of the single pillars will be 6 feet 6 inches. Each sign comprises a base in the form of an automobile artillery-pattern wheel, from the hub of which projects the standard. At the top of the standard is an ellipse of flat brass, bearing within it a brass plate, upon which appears the name of the car or article exhibited in the space directly back of the sign. If the concern in any case has a trade-mark style of lettering for its trade name, this will be reproduced. The name in any case is in blue on the brass plate.

The position of the various pillars are indicated on the floor plan of this section of the building, the groups of high pillars being indicated by hollow, open circles and the sign posts by dots. The pillars will be finished in white, with the globe, the fluting, the relief work on the capital and the panel on the base in gold. The partition which divides the automobile from the railway section and the wall along the side and end of the building, 1,665 linear feet of wall altogether, will be erected 12 feet high, with a wainscoting 5 feet high and a base and cornice each 12 inches deep. The upper panels will be of green and the lower of red burlap, while the moulding and composition relief work on the cornice and frieze will be in gold on a white background. The regular supporting pillars of the building will be finished with fluted columns the same as those on the corners of the platforms.

The equipment of the spaces will include desks, revolving chairs, arm chairs, Smyrna rugs and box lounges, the spaces thus being equipped that the exhibitors individually have nothing to do beyond placing their cars or other goods in position. At each end of the central row of spaces will be a commodious space fitted with desks, chairs, lounges, telephones, stationery and reading matter, for the accommodation of visiting dealers, friends and customers of the exhibitors. Manager Miles says the total cost to the exhibitor of these preparations per square foot will be cheaper than has ever been charged for space rental alone at any automobile exposition. The collective exhibit under the direction of the association thus seems to present the advantage of economy as well as artistic, pretentious display.



FLOOR PLAN OF THE N. A. A. M. EXHIBIT AT THE WORLD'S FAIR



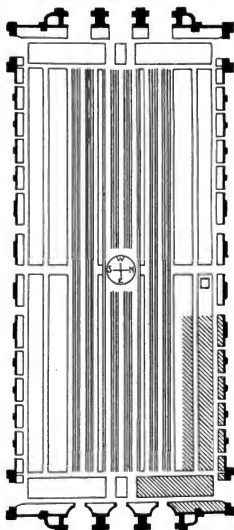
HOW THE EXHIBITS WILL LOOK

is the way of convenience in handling the displays, arrangements have been made for the free return of exhibits to the points of shipment, for insurance of displays, for janitor service, for exhibitors' tickets, for the distribution of catalogues, etc. The association is sending full particulars of these matters to the prospective exhibitors this week. On the platform or balcony which overhangs the main floor at the east end of the building, comfortably appointed quarters have been provided for the press. N. A. A. M. offices have been established on the main floor and a resident representative of the association will be at St. Louis after April 1 to the close of the exposition.

As a whole there is every indication that the exposition will be an immense success, although it is probable that a large part of it will not be entirely completed by the time of the formal opening, April 30; in fact, the installation of the automobile exhibits will represent one of the few sections to be in full swing by the opening of the big show. Some interesting features of the exposition are given out by the press and publicity department as follows:

Grounds cover 1,240 acres.  
Fifty foreign countries exhibit.  
Four miles of aisles in the agricultural building.  
Complete assemblage of the world's races.  
Athletic contests—all nations and races.  
Revival of Olympic games of ancient Greece.  
The widest boiler plate ever rolled.  
Full sized yacht, completely rigged.  
Manufacture of nitrogen from the air.  
Wireless telephone station in operation.  
Gem cutting, grinding and polishing.  
Mining gulch—12 acres in extent.  
Philippine exhibits, cost \$1,000,000.  
Largest gas engine—3,000 horsepower.  
Botanical gardens, amid the cascades.  
Alship tournament, \$200,000 in prize.  
Full sized model United States warship.  
Model farm, exhibited by U. S. government.  
Exposition costs \$50,000,000.  
Four acres of growing fresh fruits.  
Bi-monthly exhibit of seasonable flowers.  
Tobacco exhibit, covers over half an acre.  
One acre conservatory—rare flowers and plants.  
Floral clock—minute hand 2,500 pounds.  
Assembly hall seats 1,200, agriculture building.  
Clock dial, 100 feet across; largest on earth.  
Cotton exhibit, one-third acre; 60 feet high.  
Sugar exhibit, every phase; cane to caramel.  
Native Alaska buildings, real totem poles.  
Also butters and fishery—Japan aborigines.  
Ancient Mexican city of Mitla reproduced.  
Historical records of Louisiana territory.

Typical frontier trading post reproduced.  
Stadium, seating capacity 27,000 persons.  
Meeting of national rowing regatta.  
Great display in gymnasium trophy room.  
Athletic sports and games in general.  
Iron statue of Vulcan, 50 feet high.  
Turquoise mine in actual operation.  
A typical Pennsylvania coal breaker.  
Models of coal mines and appliances.  
An operating lapidary and assay office.  
Outside forestry exhibits, covers 15 acres.



MOTOR AGE

PLAN OF TRANSPORTATION BUILDING

Outside live game exhibits, 10 acres.  
An international angling tournament.  
Historical exhibit of R. & O. railroad.  
Edison's personal exhibit of inventions.  
Imitation diamond factory in operation.  
Display of jewelry valued at \$10,000,000.  
Ice plant—300 tons daily capacity.  
Special pavilion for sculpture.  
Idaho silver nugget—weight 10 tons.  
Turbine engine of 8,000 horsepower.  
For athletic events, \$150,000.  
United States Fisheries building, 135 feet square.  
Live stock, 37 acres; \$250,000 in prices.  
Hank Monk's famous stage coach.  
Wireless telegraph station in operation.  
Working display of United States big guns.  
Liberty bell in Pennsylvania building.  
Germany vs. America in forestry exhibit.  
Placer gold mining in mining gulch.  
Tree 800 years old from North Carolina.  
Giant locomotives at full speed.  
Locomotive tests throughout season.  
Automobile speeding contests.  
Modern printing establishment in operation.

The exhibitors in the National Association of Automobile Manufacturers section are:

Vehicle Equipment Co.	.....	New York
Olds Motor Works.	.....	Detroit
Grout Bros.	.....	Orange, Mass.
White Sewing Machine Co.	.....	Cleveland, O.
Winton Motor Carriage Co.	.....	Cleveland, O.
Knox Automobile Co.	.....	Springfield, Mass.
Cadillac Automobile Co.	.....	Detroit, Mich.
Ford Motor Co.	.....	Detroit, Mich.
Duryea Power Co.	.....	Reading, Pa.
Raker Motor Vehicle Co.	.....	Cleveland, O.
Moyra Automobile Co.	.....	New York
Wards Motor Vehicle Co.	.....	Chicago
National Motor Vehicle Co.	.....	Indianapolis
Smith & Mabley	.....	New York
Peoples Motor Car Co.	.....	Cleveland, O.
Predonia Mfg. Co.	.....	Youngstown, O.
St. Louis Motor Carriage Co.	.....	St. Louis, Mo.
Packard Motor Car Co.	.....	Detroit, Mich.
Thomas B. Jeffery & Co.	.....	Kenosha, Wis.
George N. Pierce Co.	.....	Buffalo, N. Y.
E. B. Thomas Motor Co.	.....	Buffalo, N. Y.
Electric Vehicle Co.	.....	Hartford, Conn.
Pope Mfg. Co.	.....	New York
Haynes-Apperson Co.	.....	Kokomo, Ind.
Waltham Mfg. Co.	.....	Waltham, Mass.
Matheson Motor Car Co.	.....	Grand Rapids, Mich.
Sandusky Automobile Co.	.....	Sandusky, O.
Michigan Automobile Co.	.....	Kalamazoo, Mich.
Hudson Bros Mfg. Co.	.....	Kenosha, Wis.
Veeder Mfg. Co.	.....	Hartford, Conn.
Twentieth Century Mfg. Co.	.....	New York
Motoring Device Mfg. Co.	.....	Vandalia, Ind.
Gray & Davis	.....	Amesbury, Mass.
Fisher's Steel Tube Co.	.....	Pittsburg, Pa.
Dayton Electric Mfg. Co.	.....	Dayton, O.
American Tubular Wheel Co.	.....	Cleveland, O.

## MOTORIZING IN HOLLAND

### Speed Regulations Very Rigid and Strictly Enforced—What Motor Car Tourists Must Do

Surprise has been expressed over the fact that Holland is seldom mentioned in connection with automobile matters; but once or twice within the last 12 months have events been held in the land of the Dutch where automobiles took a prominent part. The first of these was the endurance run, and the second the inestimable help which automobile owners gave the Dutch government during last year's strike of the railway employees, which occasioned a tie-up of almost the entire railway service of Holland. All the owners of motor cars placed their machines at the disposal of the government and thus rendered a service which was and will always be highly appreciated.

Many fine roads, as well as a great number of bad ones, can be found in Holland, and the fact that it is a neighbor of Germany and Belgium, two of the greatest automobile producing countries of Europe, makes it surprising that there is only one automobile manufacturing concern in the country. Spyker Brothers, are located in Amsterdam. There are a few houses which import automobile parts and then assemble cars, but the Spyker is the only genuine Dutch car.

Among the automobiles sold in Holland the Durkopp and Cudell, of German make; the Peugeot, Darracq, de Dion-Bouton and Delahaye, of French make, and the Belgica and Germania, made in Belgium, are especially noticeable. Few motor cycles are in use, and most of these come from Germany.

The Nederlandse Automobil Club was founded in 1898 and for several years had but a few members. In 1902 the club was given a royal permit and headquarters were established at The Hague. Jonkheer Borel van Hogelanden is the president, and the membership now has passed the 200 mark. The speed regulations of Holland are not as liberal as are desired by motorists. Under no circumstances is a speed of more than 12 miles permitted, even on country roads, while in crossing bridges, turning corners, and passing through public places and squares, the average of 5 miles must be strictly observed. In large cities the speed must not exceed that of a trotting horse. The regulations are especially strict concerning tourists or foreigners in Amsterdam, where a special permit must be asked from the mayor. If the visiting motorists intend to remain several days, they must report the matter to the police department and procure an authorization, without which they will be liable to prosecution.

Motorists who intend to make a trip into Holland must write to the minister of work, at The Hague, concerning the use of the state's roads, while for the use of all other public roads the excursionist must write to the provincial assembly, at Middelburg, for a permit.

### SIGHT-SEEING AUTOMOBILES

Washington, D. C., March 12—The past week marked the introduction into Washington of two new automobile schemes. One is the Washington Auto-Cab Co., which is to be incorporated within the next few days. It will be a subsidiary company of the National Auto-

mobile Co., and will be under the management of John C. Wood, with headquarters at 1120 Eighteenth street. It is the purpose of the company to operate a number of cabs for sight-seeing, the machines being a new special style of open Oldsmobile runabouts seating two passengers, with a boot in the rear for the chauffeur. This boot is built up sufficiently high to enable the operator to see over the heads of his passengers. The steering apparatus is the same as on the regular Oldsmobile runabout. These cabs afford a novel way of seeing the numerous points of interest in Washington and the rates have been so adjusted that they are only a fraction higher than those for horse-drawn vehicles. At the present time the company has ten machines in use and more are to be added as soon as they can be manufactured. During the winter time it is the intention of the company to have the cabs inclosed.

Still another "Seeing Washington" scheme is being promoted by the Observation Automobile Co., which is operating a large 4-ton vehicle built on the Fischer system. It is capable of carrying thirty passengers, half of whom ride on the top of the machine, while the others are carried inside. Access to the top of the machine is by means of a spiral stairway, the seats on top being arranged sideways, while the inner seats are lengthwise. At the present time the company has only one vehicle in operation and it makes three trips daily at the rate of \$1 per passenger. During each trip the machine passes all the public buildings, traverses Pennsylvania avenue, the mall and parks, showing all the aristocratic residential streets, embassies, legations and homes of famous people in the section where street cars are prohibited. On the car during each trip is a lecturer who imparts to the passengers on route terse, comprehensive, historical and interesting information in a bright and entertaining manner.

### RECENT INCORPORATIONS

South Bend, Ind.—The Studebaker Automobile Co., capital stock, \$100,000. To engage in the manufacture and sale of all kinds of automobiles. Directors, Col. George M. Studebaker, Clement Studebaker, Nelson J. Riley, E. Louis Kahns, T. W. Goodridge, J. M. Studebaker, Jr., F. S. Fish.

New York—Automobile Touring & Sight-Seeing Co., capital stock, \$25,000. Directors, J. F. Padelford, Louis J. McMahon, Stephen McPartland.

Jefferson, Mo.—City Automobile Co., capital, \$2,000. Object, to buy and sell automobiles and sundries.

Moline, Ill.—Moline Automobile Co., capital stock, \$50,000. To manufacture automobiles. Incorporators, O. J. Root, H. A. Soverhill, Rufus Walker, Jr.

New York—Universal Rotary Motor Co., capital stock, \$250,000. To manufacture motors, etc. Incorporators, Leopold I. Lippmann, Theodore A. Wegman, Nathan Krenman.

New York—The Buffalo Motor Car Co., capital stock, \$25,000. To manufacture cars, carriages, bobs, etc. Incorporators, Frank I. Alliger, Frederik Wendt and William A. Lutz.

Chicago—Limousine & Carriage Mfg. Co., capital, \$15,000. Object, manufacturing limousines, carriages and automobiles. Incorporators, Joseph E. Vanclave, Frances R. Carroll, George F. Hendry.

## CARRIAGE MEN FRIENDLY

### Automobile Has Had Its Effect on Their Business But to No Serious Disadvantage as Yet

One of the leading carriage journals of America, in speaking of the effect of the automobile on the carriage industry, says in its last issue that the automobile has interfered to a limited extent with the demand for first class carriages, but it has not as yet cut into the market for lower priced vehicles. It further says that the feeling of the carriage people toward the automobile industry is far more friendly than ever before.

The Carriage Makers' Journal, of Paris, draws the deduction that the automobile, in spite of its rapid development, has not done the carriage builders any harm outside of Paris. It says: "It is indubitable that the progress of automobilism has recently created a profound disturbance in the carriage-building trade and that the latter has suffered from the newly developed taste for mechanical locomotion, but up to this time the statistics show nothing definite, since the majority of those who own horses and vehicles, in possessing themselves of automobiles, have not got rid of their other vehicles. If we consult the license list of swung vehicles taxable as 'voitures de luxe,' we find in Paris 9,613 were constructed in 1902 as against 10,632 in 1901, and 10,926 in 1902. As to two-wheel swung vehicles, 1,922 were constructed in 1902 as against 2,116 in 1901. It is thus evident that in the city of Paris the construction of first class swung vehicles has diminished in proportion as the construction of automobiles has increased, and that the carriage building industry has suffered in due ratio. It should not be forgotten, however, that the rapid extension of street railway lines and the installation of the underground electric road have also worked against the carriage builders, and that their losses may not be solely chargeable to automobilism."

In the whole of France the tax list shows that 380,094 new voitures de luxe were declared in 1901, against 378,607 in 1902. In 1902 the number of swung two-wheel vehicles increased from 1,196,460 in 1900 to 1,222,136 in 1902. The total gives 1,600,793 in 1902 as against 1,575,554 in 1900.

### ADVERTISERS ORGANIZE

A manufacturers' advertising club has been formed at Cleveland, O., the purpose being to increase the efficiency of advertising. Only the representatives of manufacturers are eligible to membership, agents and brokers being barred. The club will hold monthly meetings at which an address will be delivered by an advertising authority. Charles R. Shaaks, general sales and advertising manager of the Winston Motor Carriage Co., has been elected president of the club. Mrs. F. O. McFetish, advertising manager of the Standard Tool Co. and the Standard Welding Co., is secretary and treasurer.

### GARAGE FOR SOCIAL CLUB

The Rumson Club, of Hoboken, N. J., has just completed its new club house on the Shrewsbury river, and it now finds that it will be necessary to build a garage for the benefit of the many members of the club.

# STORAGE BATTERIES FOR VEHICLES

AT THE last meeting Mr. Alden discussed the automobile as a general proposition, with particular reference to the electrically-driven type. We are now considering that part of the electric automobile which supplies the power, the storage battery. You will be most interested in the practical details and the results, and I will not dwell on the chemical theory more than is required for an understanding of the practical side of the question.

Theoretically most metals and their oxides can be used to form secondary electrical couples, but the practical difficulties in the way of using some of them have narrowed the choice very greatly. The lead-lead oxide couple has been the one to meet with practical success as a commercial proposition, largely because its characteristics involve a larger proportion of favorable features than do those of other metals. Lead is insoluble in sulphuric acid. It forms in combination with oxygen a series of salts, stepping up as regards the amount of oxygen in combination with the lead. The difference of potential between lead and its peroxide is about 2 volts, which is higher than the difference of potential between any other metal and its oxide. The local action between lead oxide and a lead supporting plate in a bath of acid is very slow. The extent of the commercial success attained by the lead battery industry is well exemplified by the business of the electric storage and primary companies, which in the year just closed amounted to about \$500,000 for vehicle batteries alone.

\*\*\*

A storage cell has four essential parts—a set of positive plates, a set of negative plates, a bath of dilute acid, and an airtight container jar for the whole. Roughly speaking, when a cell is in a state of charge, the active material on the positive plates is high oxides of lead; that on the negative plates is metallic lead in a highly porous state. When the cell has been discharged both plates contain more or less sulphate of lead. In other words, the result of discharging a cell is to remove acid from the liquid and combine it with the substance of the plates in such a way that the result of charging it is to restore the acid to the liquid and the plates to their former condition.

The reversibility of the lead oxide couple was discovered accidentally many years ago. It was found in the case of two sheets of lead immersed in a solution of sulphuric acid, one of which carried the negative pole, where the hydrogen is given off, remains bright, and the surface of the positive pole, where the oxygen is given off, becomes converted to a dark reddish brown crust of lead oxide. On reversing the direction of the current in the circuit, the oxygen is removed from this crust, leaving a thin film of pure metallic lead in a spongy condition, while the oxide crust is formed on the other lead sheet. Repeated reversals end in producing sufficient active material to give appreciable capacity to the couple. This forming process was very long and tedious, not to say expensive; moreover, the formation of active material from the lead support continues after the plates are in regular operation, and results in wearing away the support plate, thus limiting the life of the cell.

It was, however, subsequently discovered that this plate can be quickly furnished with capacity by simply spreading a crust of one of the oxides of lead on them, after which a comparatively short period of formation reduces the coating on the negative plates to spongy metallic lead and raises the coating on the positive plates to a dark brown or chocolate-colored peroxide. I merely mention these historical facts because these two processes were the beginning of two distinct types of batteries, the Plante, or "formed," and the Brush, or "pasted" type, both named after their inventors.

Modifications of both types are now in use, as each has characteristics which fit it best for certain kinds of service.

\*\*\*

The principles I have sketched out as underlying the storage battery are the same today as they were years ago. The great advance has been made in details of construction and methods for the practical application of batteries to commercial industry, an advance which has only been possible because of persistent effort directed along



commercial lines and backed by special resources.

Stationary work, where weight is no special object, it is common to use a modification of the "formed," plate with a non-corroding support, because of its enduring power, or life. For transportation we use the "pasted" type except in some special kinds of work.

The design of plates has been worked out with great care, both as regards the shaping of the parts and their relative proportions to one another, and the positive and negative plates differ considerably. The active material is supported by grids of lead antimony alloy, the positive grid being of the cage type, consisting of thin vertical ribs about  $\frac{1}{8}$  inch apart. These ribs are connected by small bars, those on one face being staggered with relation to those on the other. The object of the antimony is to give stiffness to the grid and to make it non-corroding; otherwise it would be corroded away in the operation of the battery and would soon cease to support the active material. The negative grid is made from an antimony-lead sheet, having a frame cast around it to form the edge of the plate and to add stiffness to it. The body of the sheet is filled with perforations made by a tool, which does not remove any material, but tears its way through the lead, curling it up at the edges and leaving numerous small claw-like projections around each hole, forming a series of books. Half of the projections are made from one side and half from the other, so as to thicken both sides of the sheet with these books. The positive grid is pasted with minium and peroxidized, or "formed," in a separate bath. The thickness of the finished plate is  $7/32$  inch and the dimensions are about 5 by 9 inches. The negative plate is pasted with litharge and reduced, or "formed," in a metallic lead. It is  $3/16$  of an inch thick, and it is made in sizes to match the positive plates. The capacity of a couple—negative and positive—in amperes hours is proportional to the quantity of active material exposed to the electrolyte. The different capacities of individual cells are obtained by varying the number of couples of which they are made up.

\*\*\*

At one corner of every plate is a projection called the lug, the top of which is burned to the strap. A set of positive or negative plates burned to its strap is known as a group, and the combination of a positive and negative group with its separator is known as an element. Practice has shown it desirable to have the two outside plates negative, hence every element will be found to have one or more negative plate than it has positives. The separator is a thin wooden diaphragm, made of special wood of close texture, the surface being grooved. Sheets of very thin hard rubber, perforated with a large number of small holes, are placed between the surface of the plate and the wood separator. The element is placed in a hard rubber jar, deeper than the plates. At the bottom of this jar are two ridges, about  $\frac{1}{8}$  of an inch high, which support the element, so that a free space is left for the collection of the sediment, which would short circuit the plates if not taken care of in this way.

The individual cells are mounted in trays and are then connected over the tops of the jars by lead straps "lead buried," that is, welded, together, no solder or metal other than the lead being permissible. Covers, sealed in with a special compound, prevent the slopping of the acid, and holes in the centers of these covers permit the escape of gases which are generated during operation.

We have seen that the lead storage cell has an electrolyte of force of about 2 volts. The exact value of the pressure at the terminals of a

cell depends on the state of its charge and on the work that it is doing at the moment the observation is made. We have seen also that the cycle of discharge and recharge involves a transfer of a portion of the sulphuric acid in the electrolyte to the plates and back again. These two characteristics are of value in helping the operator of a battery informed as to its condition.

Since every electric automobile is provided with voltmeter and ammeter to indicate the pressure and supply furnished by the battery, the voltage test is in the line of application, and it can be made without stopping, but the acid test reveals conditions that the voltage test does not. To gain a full knowledge of the cell, both should be understood and considered in relation to one another. The density of the acid is measured by a hydrometer floating in it; the denser the acid, the higher it floats, and the degrees of density are marked off on the stem. To apply this test to an automobile it is of course necessary to take a sample of acid from a cell with a syringe hydrometer.

\*\*\*

Perhaps the best way to bring out the main points in this connection will be to follow the changes through a cycle of charge and discharge with a charged battery, we find the positive plates a dark chocolate color and the negatives a gray lead color. The acid has a specific gravity of 1.300, and a voltmeter shows about 2.1 volts per cell, or 54 volts for a twenty-four-cell battery on open circuit. Since it requires a pressure of five cent over any conductor, the instant the battery begins to discharge, a portion of its pressure is lost to view, being taken up in forcing current against its own internal resistance. The amount so lost is small, of course, and depends on the size of the discharge current occurring. Thus a twenty-four-cell battery, starting to discharge at its 4-hour rate, 24 amperes, will drop from its open circuit reading 54 volts to 49; if the rate were doubled, it would drop to 47. Assuming the automobile to be running continuously on a level, the battery discharging 24 amperes, the voltage would gradually drop to 41 volts, or 1.7 per cell in 4 hours' time, at which point the battery is nearly exhausted, so that if the discharge be continued further, the voltage will sink quite rapidly to a low point. When the discharge is stopped, however, the voltage will rise instantly to 45 volts, and in 25 or 30 minutes to 48 or 49 volts. Further, the color of the positive plates will be found several shades lighter than at the start, and the acid density will be found down to about 1.200, a difference of 100 points on the scale. As this change in density has been proportional to the time, the rate of discharge having been uniform, it follows that a density reading, taken at any intermediate point, would have revealed how much of the charge had been used, whereas this is more difficult to estimate from the voltage reading, especially as the voltage will be found to be somewhat irregular when the current reading is about 24 amperes for this type of cell.

The battery is now ready for the charge. The open circuit reading is 48 or 49 volts, but as soon as the current of 20 amperes starts, it jumps up to 52 or 53 volts, because the voltage is increased through the battery is from the outside and is added to the pressure of the battery.

\*\*\*

The current passing through a battery evolves oxygen on the positive plate and hydrogen on the negative plate. These gases acting on the sulphate left in the plates by the discharge, return them to their original condition. At first the action is perfectly quiet and without visible effect, but as the charge proceeds the pressure rises slowly, and towards the end, as the supply of sulphate becomes limited, some of the gas evolved, being no longer needed, begins to come off through the liquid in bubbles. As the charge nears the end, the bubbling becomes violent and the voltage rises quite abruptly to 55.5 per cell, or 61 volts. At this point the charging rate should be reduced to 8 amperes, because the unconverted material on the plates is so small that the bulk of the current is being wasted in forming gas. The charge is now continued at this rate until the pressure falls to rise any further, at which point the charge is complete, and this pressure

EDITOR'S NOTE—This is the second of the lectures in the electric course at the automobile school conducted by the Boston Y. M. C. A. It is by Philip W. Davis, of the Electric Storage Battery Co.





will be somewhere near 2.55 volts per cell, or 61 volts for a twenty-four-cell storage battery. I have spoken of acid density and voltage readings as if they were fixed quantities. This is not absolutely true. Temperature will affect the density of acid as much as the weight or any other substance. It will also affect the degree of chemical activity of which voltage is a result. The best results are obtained with the temperature between 70 degrees and 90 degrees Fahrenheit.

Now, also, of the plates will alter the voltage readings, as well as the capacity somewhat. As there may be sediment in an old battery, some of the acid is liable to soak into it and be lost from the electrolyte; therefore, when the plates are charged and all the acid in them has been expelled, a density reading might not show full 1.200, but if the electrolyte fails to rise in density with continual charging, it is evident that all the acid is out of the plates. The density reading is also affected by evaporation of the water from the electrolyte. Naturally, if a portion of the water has evaporated, the density will appear greater than the state of charge calls for under normal conditions. The height of the liquid in the cell should always be kept above the tops of the plates by the addition of water when needed.

Overcharging or over-discharging a storage battery is as undesirable as overfeeding or overworking men or horses. The reasons are not difficult to fathom. We have seen that at the end of charge gas bubbles are liberated from the plates. These agitate the liquid and cause washing of the material; besides, the gas is liberated more or less within the surface of the active material and cannot but push and crowd the electrolyte as it works through, thus loosening them and tending to shed some from the outside layers. Moreover, an overcharge cannot add capacity, for when all the material is converted there can be no further addition to it, and further charging is a mere waste of energy as well as a detriment to the plate. It follows, then, if a man makes only short runs with his vehicle each day, rather than to return the small amount taken out, with a charge after each run, he will do better to wait until the battery is nearly exhausted and then give it a full charge. In this way he will cut down the amount of gassing to which the battery is subjected, thereby increasing its chance of life. For example, if a vehicle has a capacity of 50 miles, and runs but 15 miles a day, rather than charge every day it is better to charge only twice a week.

The over-discharge results also in a loss of capacity largely by increasing the necessity for overcharge. The sulphate of lead present in the plates at end of discharge is like the oxide in having several stages with increasing quantities of the acid radical in combination with the lead. The further the sulphation is carried, the greater is the work that has to be expended upon it to bring back to an active state, and, therefore, the longer the overcharge. If the plates have been over-sulphated, especially if this be partial in extent, the operator may be deceived by the rise in voltage, which will appear to indicate a full charge very early, because a portion of the material will be fully charged while the rest, being badly sulphated, is very slowly being converted. All acid density reading will, of course, reveal the fact that all the acid has not left the plates. In such sulphation cases, as has been just described, the result of leaving a battery in a state of very low discharge for a continual period of some days. In that condition the process of sulphating goes on, even though no demands are made on the battery. The man who wishes to keep his battery in perfect condition will give it some charge at once if he has run the operator very low.

#### REPAIRS

Granting that the operator of an electric vehicle understands its mechanism and his battery well enough to avoid abusing them through ignorance, the next thing that interests him is the question of repairs.

How much attention does it require?

What are the chances of unexpected breakdown?

How fast will it travel?

How steep a hill can it climb?

How far will it go on one charge?

Is it possible to obtain recharges so as to cover considerable distance?

What does a recharge cost?

What does it cost to maintain it?

How long will it last?

How can it be repaired when it requires more attention than the owner or his employees can give it?

The storage battery calls for far less attention than other forms of power storage. The actual amount depends on the service required on the vehicle. Assuming that the operator has some idea of the distance covered since his last charge, he will be required only to connect and disconnect the charging plug and take two or three readings from his voltmeter towards the end of charge to determine the proper time to disconnect. If the vehicle runs its full mileage every day, this operation must be performed every day; otherwise, as we may have seen, it may be less frequent. About once a week it is well to read the acid density with the syringe hydrometer, and see to it that the electrolyte stands above the plates, adding water if needed.

I think there is more or less general impression that the electric vehicle is more liable than others to give out unexpectedly. This is a mistake. The small number of parts and the general principle on which it operates render the chances of a real breakdown of the battery extremely small. The burning out of a terminal or connection, due to some accident, or the breaking of a jar need not make it impossible to operate the vehicle and reach home. When an electric vehicle does become stranded, it is usually because the available mileage has been exceeded or because of some mechanical defect in the gear, such as a tight bearing, steering wheels out of alignment, or imperfect release of the break, all of which would cause an abnormal consumption of power and run the battery down sooner than expected. Such defects, however, are hardly chargeable to the battery, but rather to the operator.

#### QUESTIONS

The question of speed and hill-climbing ability is largely one of design of the motor, which can be built for any speed within practical limits. The battery will readily stand overloads of 100 per cent more in expenditure of energy than its normal discharge rate. I have in mind a vehicle owned in Providence, which is called upon to climb Waterman's hill, a 12 per cent grade, about an eighth of a mile long, every day, and which has shown no very unusual depreciation. I am not aware what the actual discharge rate of the battery was when climbing this hill, but assuming that the vehicle was designed for 14 miles an hour on a level and performed a 4 when on the hill, the overload would be about 370 per cent. The trolley cars which run up College hill, which is a 15 per cent grade, are obliged to receive assistance from a counterweighted cable. The limit to the hill-climbing abilities of an electric vehicle designed for that purpose probably would be found at the point where the wheels can no longer secure sufficient traction rather than in any of the internal parts.

The question of distance covered on one charge is governed by the amount of energy which can be stored in the battery per pound and by the amount of energy required to overcome the friction and other resistance to the progress of the vehicle. A complete battery, ready for use in a vehicle, will furnish on the catalogue 4-hour discharge rate, a little over 8 watt hours per pound. This, by the way, is about four times as much energy per pound as that furnished by a large battery designed for station use, which shows what careful attention to the design of details can accomplish. Under ordinary good conditions, a vehicle should not take much over 100 watt hours per ton mile. It follows, then, that a battery weighing 2,000 pounds, would furnish 10,000 watt hours, and if mounted on a vehicle without weight, it would run 60 miles, which is therefore the theoretical limit. As a rule, plates 1 inch thick are about the weight of the vehicle, which at once reduces the mileage limit to 80. An ordinary vehicle, furnished with a battery of 24 cells, weighing 250 pounds, has a total weight of about 1,200 pounds, or 1,500 pounds, including two passengers. The battery being a little over a third of the total weight, the mileage made by the vehicle is a little more

than a third of 160, or about 58 miles, which is close to the usual mileage of such runabouts when in good condition. To secure a longer run it is necessary to design for more battery in proportion to the total weight carried, but this, I think, is about as far as the average mortal cares to ride on a cold day without stopping to recharge himself as well as his vehicle.

Inasmuch as the electric vehicle must replenish its power supply from some generating station, it is not at the present time suited for general touring purposes, though as regards the country about this city, conditions are such that very considerable distances can be covered without getting out of reach of a source of supply. I am told that through the efforts of the Edison Illuminating Co. and others, something over 100 charging stations have been established in New England, and more than one run has been accomplished from Boston to New York without mishap. On the principal roads within a radius of 50 miles of Boston the Edison company has placed signs indicating the location of the nearest charging station.

#### EXPENSE

The expense for recharging vehicle batteries naturally varies widely. It is affected by the power to be done, by the price of a current, which may vary from 4 cents a kilowatt hour to 20, by the efficiency of the battery as determining the quantity that must be fed to it to obtain a full output, and also by the relation of the supply pressure to the requirements of the battery. Assuming an efficiency of 75 per cent, in the case of the battery of twenty-four cells, already referred to, it would be necessary in order to secure a discharge of 4,400 watt hours to provide an input of 5,860 watt hours, measured at the terminals of the battery, which at 10 cents a kilowatt hour, is worth 58 cents. On the basis of 58 miles obtained from 4,400 watt hours, the cost for electricity is about 1 cent per mile, a battery of 24 cells would not require over 61 volts for a complete charge. Unfortunately electricity is usually furnished at 110 volts pressure, and therefore if we charge a twenty-four-cell battery from the street mains, the regulating resistance will have to absorb about 40 volts. As the owner must pay for all the energy drawn from the supply, only part of which reaches his battery, the cost to him is increased, he needs ten cents per mile for this particular battery. In automobile garages, where many batteries are cared for, arrangements are often made to supply the current at proper pressures.

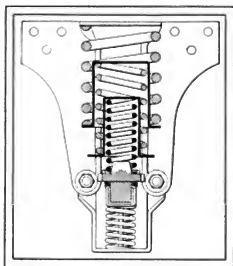
The cost of maintenance and the life of batteries will vary as greatly as the disposition of the people who operate them. The wear takes place on the plates and is harder on the positives than it is on the negatives, and the latter will frequently outlast two sets of positives. The hard rubber jars naturally do not wear, but as they are somewhat brittle, they are occasionally subject to breakage from shock or careless handling. In general the positive plates last anywhere from 3,000 to 8,000 miles, and the negatives from 8,000 to 12,000, but there are cases where as high as 18,000 miles have been obtained from both kinds of plates. I speak of the life in terms of miles rather than years, because the wear is proportional to the work done and not to the time in which it is done. When the plates are worn out as far as operation is concerned, they are still of some value, as they may be turned in as part payment towards new ones. This means that assuming 5,000 miles as the life of the positives and 10,000 miles for the negatives, the cost of renewals every 10,000 miles would be about \$200. In addition to this expense there may be some expense for removing sediment and cleaning the elements between renewals, perhaps bringing the total expenditure required to keep the battery in perpetual running condition up to \$250 every 10,000 miles.

When the battery requires repairs or overhauling, or renewal of plates, the work is best tended to by expert mechanics who have proper facilities.

# AUTOMOBILE

## USES SPRINGS FOR BUMPERS

The Graham Co., of Boston, has in the past few months introduced several forms of spring bumpers as supplements to the regular springs and as substitutes for the rubber bumpers sometimes used. The illustration shows in section a multiple series spiral spring which is the company's latest development of the spiral spring. It is readily attachable to any new car and has claimed for it the peculiar advantage of adapting itself to the support of various loads in a manner more flexible than that in which the ordinary leaf spring accommodates itself to different loads. The stated action of the spring is that the smallest spiral takes the load when the car is empty or with but one passenger; that the middle spring supports the load of a fully loaded car, and that the largest or outer spring is only in action when the car receives an excessive jolt due to irregularities in the road surfaces, etc. The multiple spiral spring is said to accommodate itself to any load up to 2,000 pounds, having a range of deflection of 2½ inches for 500 pounds up to ¾ inches for the maximum of 2,000 pounds.



GRAHAM MULTIPLE SPRING

or disengagement of the clutch is obtained and that the clutch may be allowed to slip without entirely disengaging it, should such action be desirable in driving the car.

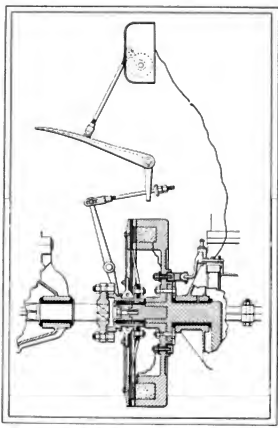
## NEW VALVE WORKING SCHEME

One of the novelties at the recent automobile show in Brussels, Belgium, was the Budaun motor. This is a four-cylinder, vertical motor in which all of the inlet and exhaust valves are in a row along the tops of the cylinders, which are in pairs. The valve operating mechanism is simple. There is a cam shaft extending across the cylinders in line with the valves and driven by a shaft and bevel pinions from the motor crank shaft. The cam shaft is fitted with the usual cams, which bear directly upon tappet arms pivoted upon a shaft parallel with the cam shaft and striking directly upon the top of the valve stems. The commutator is on the end of the cam shaft.

## GOLIATH MAGNETIC CLUTCH

One of the several new magnetic driving clutches which have been brought out in Europe is the Goliath, which is of Belgian origin. The sectional view herewith shows it in working position between a motor and transmission gear. In the rim of the fly wheel is an annular groove of rectangular cross section. This contains a winding of fine silk insulated copper wire, which is sealed in place by a thin plate over the face of the groove. One end of the winding of the insulated wire is grounded on the fly wheel, while the other end is carried to a copper collector mounted on but insulated from the back of the fly wheel. The current is supplied by a primary storage battery or a dynamo driven by the motor. One terminal of the circuit is grounded on the fly wheel and the other connects with a carbon brush in contact with the collector ring. In the circuit is a resistance coil which the illustration is indicated by the box above the fly wheel. The other member of the clutch is in the form of a disc slidably mounted on the shaft member that is to be driven. Its sliding movement is somewhat controlled mechanically by a pedal and suitable links and lever arms. The same pedal controls the resistance coil whereby the resistance of the electric circuit may be varied from cut-out to the maximum strength.

When the pedal is up the full current is supposed to flow through the circuit and the magnetic winding consequently exerts its greatest force upon the fly wheel rim, which, being magnetized, holds the disc member of the clutch tightly to it. If the pedal is depressed its first resulting action is to vary the resistance to weaken the current and consequently the strength of the magnet, and in turn the strength of the clutch itself. Further depression so weakens the magnetic strength that the clutch is practically free and then the mechanical action of slipping the disc entirely away from the fly wheel rim or magnetic member occurs. It is claimed that by this action a gradual application



GOLIATH MAGNETIC CLUTCH

# DEVELOPMENT

## ANOTHER PRE-SELDEN CAR

Among the many articles which are now appearing in the French automobile trade papers concerning the Selden patent situation—a situation, by the way, which has considerably aroused the naturally excitable Frenchman—is one in a current issue of *l'Automobile* by M. Jonasz, who describes a gasoline motor propelled car with friction clutch that was, it is claimed, made in Vienna, Austria, and put into use before the time of the application for the Selden patent. The article, translated, is as follows:

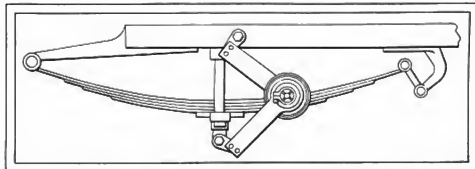
"This automobile belongs to the Austrian Automobile Club, and I have seen it at the house of Louis Lohner, the manufacturer of the Lohner-Porsche cars. The car was built by a Vienna mechanic, Siegfried Marcus, between 1873 and 1875, and was really the second car constructed by him, his first one having been made about 1869.

"Marcus, to whom we owe the first application of magneto ignition to explosion motors, showed a horizontal four-cycle motor at the Vienna world's fair in 1873. It was described in the official exhibition report by M. J. Radliger, a professor in the Vienna polytechnical school. Marcus died in 1898.

"No one has yet been able to find a description of the Marcus complete automobile published prior to the application for the Selden patent—1879. Inasmuch as a description printed before this date would be the only one of value in disproving the validity of the Selden patent, it seems that Marcus ignored the importance of his invention as he did not seem to have done anything toward securing a patent before 1879. However, it is very likely that the tests made by the inventor at that time must have caused interest among the Viennese, and that the newspapers and magazines of that time had some mention of it. It is also likely that Marcus contributed a description of his invention to one of the scientific societies of the Austrian capital. Therefore it is possible that some day a document will be found which would prove public description of the Marcus car prior to 1879.

"The Marcus car has wooden wheels with iron hubs and tires. The frame is of wood with iron reinforcement and rests upon the rear axle without springs; the front only being fitted with springs. The motor, which is of the horizontal one-cylindrical kind, is placed in the middle of the frame, upon a bar iron sub-frame. It is a 1½-horsepower engine, of 110-millimeter bore and 260-millimeter stroke. The speed is about 230 revolutions per minute. The cylinder cooling is by a thermo-syphon water circulation, the water tank of which is located under the seat of the car. The carburetor is under the seat and is formed of a box having double walls and a rotary disc having bristles on its periphery to break up the charge of the fuel thrown up by it. The carburetor is heated by the circulating water of the motor cooling system.

"The regulation of the motor speed is by throttling the admission of the mixture. For this purpose there is a small wheel near the driver's seat. There is no other means of changing the speed. The ignition is electric by a simple magneto.



MOTOR AGE

THE TRUFFAULT SPRING BRAKE

The motor has a sort of walking beam and link system for the application of the piston energy to a main shaft under the cylinder. On this shaft is the fly wheel and the friction clutch through which the power is transmitted. This comprises an annular grooved pulley and a clutch member that might be brought into engagement with it by the manipulation of a hand lever, the action being very similar to that of the present-day clutch. The final drive from the clutch pulley to the rear axle is by a half-dozen round belts running over a drum on the axle, this drum being about five times as great in diameter as the driving pulley."

#### POLY-PHASE IGNITION

The Poly-Phase Ignition System Co., of New York, makes a system of magneto ignition in which is used a poly-phase alternator delivering two alternating currents differing in phase from each other by 90 degrees, the respective circuits of these currents being led to a double "spark" of the make and break type, so constructed that both circuits are simultaneously interrupted by the cam shaft, when sparking is required. If these two currents did not differ in phase from each other, but together followed the variations of a single phase alternating current, their interruption might take place at a time when their currents pass by a minimum of intensity, and consequently no spark would result. But as they differ in phase by 90 degrees, their interruption will cause a spark at whatever time it takes place, for their combined electrical energy is almost constant, and consequently the heat energy resulting from their interruption is also practically constant. In case a jump spark is desired, the alternating circuits are led to a special induction coil having two primaries, with the result that the secondary currents cause high tension sparks, having an almost constant heat value.

#### ORIGINATED IN THE WEST

"The craft that is to-day misnamed the automobile boat was, I believe, originated in Detroit," said G. A. Devlin, of that city, while on a recent visit to New York.

"We had a man named F. A. Rollin, who is now chief naval architect for the Russian government, who designed a machine and hull that was the fastest, so far as I know, of any small boat on any water up to that time. That was 7 or 8 years ago. Truman H. Newberry built a boat to beat everything on the lakes. There had been considerable rivalry between the yacht owners from Buffalo to Chicago as to speed, and Mr. Newberry designed his boat to beat anything in sight. He succeeded. But that only created antagonism. At the time Mr. Newberry was contracting for the machinery on this boat he bid with a firm that

lost the contract. In the employ of this firm were three mechanics named Smith.

"Sore at having lost the contract," continued Mr. Devlin, who is interested in boat building himself, "the Smith boys went to the head of their firm and said they would build a boat, at their own expense, that would give the stern to the Say When. So, when the new boat came out, the Smith boys having kept it very much under cover all this time, they finally appeared on the Detroit river a few minutes after having notified Mr. Newberry that they would be glad to meet him with his Say When. A positive meeting never was ar-



MOTOR AGE

NEW NEUSTADT TONNEAU

ranged, so far as I know, but the Smith boys, finally, a day or two afterward, met the Say When, and what they did to Mr. Newberry's boat was a plenty. Its power was triple expansion. The beam of that boat did not exceed 5 feet 6 inches. Her speed has been gauged, and there are impartial men who said she went 22 miles an hour.

"This all has to do with steam. Now comes up the new subject of gasoline. I think that Detroit is doing as much in the way of gasoline development as any other city. We are building boats 120 feet long, had beautiful specimens at that, with gasoline power. I be-

lieve that your eastern builders are learning something from our experience.

"I want to take issue with the term 'automobile boat.' There is no such thing when the term is properly digested. Motor boat is more proper as a term to distinguish any craft from sail, steam, or manual power; and I think before the present show at Madison Square breaks up there should be an understanding and a uniform term adopted to apply to this class of craft."

#### LESSENS VIBRATIONS

One of the most commended of the several European systems of spring attachments to lessen the vibration caused by jerky action of the leaf springs in returning too quickly to their normal position after depression is the Truffault device, which has been adapted to the Peugeot car, but which can be applied to any ordinarily-constructed machine. It is in principle but a brake upon the return of the spring to which it is applied, serving to render this return gradual instead of sudden. It comprises two arms which are pivoted upon each other by a stub shaft extending through two plates, one of which is upon the end of each arm. Between these plates is a leather pad. The frictional resistance in this group is regulated by pressure through a split nut, which is locked in any adjusted position by a collar and binding screw. The free ends of the arms are attached respectively to the frame of the car and to the axle. The action is that after the spring has been depressed its return to normal position is retarded by the frictional resistance in the hinge between the two arms.

#### TONNEAU OF BIG CAPACITY

One of the most recent additions to the large line of automobile bodies manufactured by the J. H. Neustadt Co., of St. Louis, Mo., is that shown in the illustration and which was made for a Chicagoan. The body is larger than it appears, for in addition to the regular rear seats in its front portion. It is said the rear of the tonneau is wide enough to hold four and in this case the total seating capacity of the body would be eight persons. All of the seats are convex with concave divisions. The body is made of solid poplar. Although not shown in the illustration it is furnished with sills extending forward of the regulation dash board.



MOTOR AGE

THE MARCUS PRE-SELDEN AUTOMOBILE



It is astonishing how little interest is manifested by flat-dwellers in automobile lawn mowers.

At a meeting of the creditors of the Morlok Automobile Mfg. Co. last week a dividend of 10 per cent was declared.

The Whipple Cycle Co., 260 West Jackson boulevard, Chicago, has the general agency from the Waltham Mfg. Co., for the establishment of agencies for the sale of Orient motor cycles in and about Chicago.

A correspondent claims through the columns of a French trade paper that, to overcome tire troubles, compressed paper can be used in the shape of protectors. Another correspondent advocates solid tires made out of compressed paper.

E. L. Grimm, of Buffalo, N. Y., and George Sauer, of Lopez, Pa., are endeavoring to secure a site at Wyalusing, Pa., for an automobile factory. They are also trying to interest some of the capitalists of that town in forming the company.

The Chicago agency for the Wayne car is in charge of Robert H. Richter, and the Glide will be handled this season by Robert R. Graham. Both of these agencies are located on 29 Lake street, in the same building with Arthur Bennett, who is distributor of the Premier.

The 1904 blue book edition of the general catalogue of machinery and tools of the Brown and Sharpe Mfg. Co., of Providence, R. I., has been revised and now contains 482 pages, much of the matter being new. The large number of tables together with other general information, makes it valuable to the workman as a book of reference.

A petition was presented in the United States district court at Philadelphia, Pa., March 7, asking that the Holley Motor Co., of Bradford, Pa., be adjudged a bankrupt. Claims to the amount of \$1,559.93 are presented. The petitioners allege that while the Holley Motor Co. was insolvent it transferred property in Bradford, valued at \$12,500, to the First National bank of Bradford. They

say this transfer was made and that preference was shown over the other creditors.

Puzzle—Interview each of the automobile dealers of any city and find which ones do all the "knocking."

The Brennan Motor Co., of Syracuse, N. Y., which manufactures gears and the Brennan motor, has orders for a number of motors and anticipates a profitable year.

According to press dispatches the record mile for straightaway driving was made at New Orleans, La., last Saturday by Miss Leah Russell, who covered that distance in the Ford 1909 in 53½ seconds. The run was over the West End boulevard.

E. M. Carey, formerly with S. S. Williams, and also with Griffin's Central Automobile Station, is now in charge of the sales department of Rothschild & Co.'s new automobile store on Wabash avenue, Chicago, where the Cleveland car will be handled.

An automobile livery and salesroom to cost \$15,000 will be erected by W. H. Barger, of South Bend, Ind. The building will be 66 by 150 feet, two stories high, and will have pressed brick and plate glass front. The building will be completed by May 1.

The Fischer Motor Vehicle Co., of Hoboken, N. J., has been sued for \$10,000 damages by Mrs. Sarah V. Brown, who is administratrix of her late husband's estate. Some time last year Brown was driving a truck along the right side of Fifteenth street, New York, when an automobile belonging to the Fischer company came along and collided with the truck. The impact knocked Brown from the wagon under his horse, killing him instantly.

The war between Russia and Japan does not seem to affect the French automobile trade with these countries. Although the largest country on the continent, Russia has a smaller number of automobilists than most any other civilized country in the world. There are about thirty-five motor cars, mostly French, in Odessa, which sells more cars than the rest of the country. There is but a small proportion even among the wealthy class as yet enthu-

siastic about automobiles. The imperial family and some of the highest officials are owners of motor cars.

The colors of Austria in the international race will be black and yellow, while black will be the distinguishing color of the Italian cars.

Frank H. Fowler, who for several years past has been with the Knox Automobile Co., of Springfield, Mass., has associated himself with the Matheson Motor Car Co. of Grand Rapids, Mich., as head salesman.

A Paris paper recently published the following advertisement: "Wanted—Amateur driver to break the kilometer record with 200-horsepower automobile, which is supposed to develop 221 kilometers per hour." A Paris automobile journal thinks it is a joke.

G. O. Heine, president of the Heine Piano Co., of San Francisco, Cal., claims he holds a contract with the Ford Motor Car Co. for the sale of the Ford car on the Pacific coast, which does not expire until next October. Joseph Holle, president of the Holle Automobile & Mfg. Co., says he secured the agency while in Chicago at the automobile show last month. Both men say they have a car load of 1904 machines on the way from the factory, and each is about to open extensive quarters in the downtown district for the sale of the machine.

Because of the growth of its automobile business, the Studebaker Bros. Mfg. Co., of South Bend, Ind., has decided to transfer its automobile interests covering the manufacture and sale of Studebaker gasoline and electric automobiles to a new organization recently incorporated under the laws of Indiana. The new corporation is called the Studebaker Automobile Co., and it has the following officers: George M. Studebaker, president; Nelson J. Riley, vice-president; Clement Studebaker, Jr., treasurer; J. M. Studebaker, Jr., secretary; T. W. Goodridge, general manager.

Pedestrians along Thirty-eighth street near Broadway, New York, were somewhat surprised last Saturday when an old-time prairie schooner rolled down the street. The old, big-horned, brown canvas-covered top looked like the prairie schooner that is popularly supposed by New Yorkers to frequent the streets of Chicago, while the running gear was discovered to be a big Mors automobile. The combination was decidedly incongruous and the innocent bystander instinctively strained his eyes to see if the sign "Pike's Peak or Bust" was on the side of the canvas.

Alfred Levegh, who died recently in France, was one of the earliest automobile racing men of Europe, driving the Mors cars for many years. During the tour of France, in 1899, he was the first, with a 16-horsepower four-cylinder machine, to defeat the Panhard drivers in several of the runs. The same year he won the Paris-Ostend. Levegh's most important victory occurred in the Paris-Toulouse race. Later in the season he won the mile race, also the Turbie event, during the Nice meeting. The last event in which he started was the Gordon Bennett race in 1901, in which he led to Poitiers, where he gave up. He suffered from lung trouble, which was the indirect cause of his death.

# AMERICAN AUTOMOBILE BOATING



## NEW RULES ADOPTED

New York, March 11.—At a special meeting of the American Power Boat Association last week important amendments to the racing rules affecting the new class of automobile boats were decided upon.

Alison P. Cole, secretary, reported that more than \$500 in subscriptions from individuals had been received for the gold challenge cup, which is to be raced for on the "point" system next summer, and that additional subscriptions were coming in. He was requested to communicate with all the clubs in the association, with a view of getting each club to contribute toward the fund.

It was decided before adopting the three following sections of new rule 4, relating to automobile boats, to make the title of those boats more distinctive by adding the word "racing" to it, so that the amendments now read:

### Rule 4—Automobile racing boats.

First—An automobile racing boat is one whose rating exceeds ten times the square root of its load water line length.

Second—Each boat of this class shall contain and be fitted with such mechanical power as will drive it astern at a rate of speed of not less than 4 knots an hour in still water.

Third—In automobile racing boats the midship section mentioned in rule 3, subdivision 3, is to be expressed in square feet, and shall be the actual greatest transverse immersed area. All other elements for measurements shall be obtained as prescribed in rule 3.

Rule 4, subdivision 1, was amended by adding at the end of the subdivision the following:

Automobile racing boats and their class signs.—First class, O, all over 100 feet three red balls; 100-foot class, P, not over 100 feet and over 90, two red and one white ball; 90-foot class, Q, not over 90 feet and over 80 feet, two white and one blue ball; 80-foot class, R, not over 80 feet, and over 70 feet, two blue and one red ball; 70-foot class, S, not over 70 feet and over 60 feet, two red and one blue ball; 60-foot class, T, not over 60 feet, and over 50 feet, two white and one red ball; 50-foot class, V, not over 50 feet, two blue and



NEW TRUSCOTT SPEED BOAT

one white ball. The matter of consolidating with the American Automobile Association, so far as race control is concerned, was not brought up, but may be at the next meeting.

A great motor boat tournament on Lake Worth at Palm Beach, Fla., next winter, seems assured. It will follow the automobile meet at Ormond. Fred Sterry, of the Breckers and Royal Poinciana hotels, has subscribed \$1,000 toward the prizes and W. K. Vanderbilt, jr., Howard Gould, Procter Smith and W. Gould Brokaw have offered cups. The meet will be run under the sanction of the A. A. A.

## A WESTERN SPEED MERCHANT

Not to be outdone by the eastern builders of speed boats, the Truscott Boat Mfg. Co., of St. Joseph, Mich., has produced a boat which the maker believes will not only hold its own with any motor boat afloat of its size but will easily outdistance any craft in western waters.

The boat is made exceptionally light, weighing, exclusive of the motor, less than 350 pounds, yet being stiff and calculated to carry a four-cylinder four-cycle motor of 24-horsepower, this power being developed at 900 revolutions per minute.

The boat is 28 feet over all and has an extreme beam of 3½ feet, the draft being but 6 inches with the motor, all equipment, and two persons aboard. The lines are sharp forward, with considerable width aft, the boat having a square stern, with rudder post, yoke and liner under the deck.

The motor is of a new design and of the

automobile type, but especially designed for marine work. This will weigh something under 500 pounds, so that the entire craft will come under the half-ton mark.

The boat has a somewhat flat turtle deck forward and a very small cockpit, capable of accommodating the motor and not over two persons at a crew. The freshboard, as the illustration shows, is small. Every bit of unnecessary wood has been eliminated in order to keep down the weight.

The boat is made from cedar of light gauge and is thoroughly braced from one end to the other, so that it will prove extremely stiff even when equipped with the power stated.

The maker states that "no extravagant claims are made as to the speed of the boat, but 15 miles an hour is the minimum placed against it, while it will not surprise anybody if this is greatly exceeded."

The company is figuring upon building a somewhat larger craft, to be engine with the maximum of power, and feels sure that it will be fully as fast as any American or foreign boat of similar size.

## HARTFORD DEEP IN BOATING

Hartford, Conn., March 14.—With the election of Fred A. Law, E. N. Way and Captain H. M. Luther, the Hartford Yacht Club thinks it has found an ideal committee to work on a basis of racing estimate and speed test control for the automobile boat season at hand. Mr. Law is one of the best posted men on gas engines in the country and had a valuable boat engine experience with the original Daimler motors installed in the Gemma, a twin-screw flyer of 40 feet which did 15 miles with her two 8-horsepower motors more than 10 years ago. Mr. Way is a designer from whose board many fast craft have been created while Captain Luther is the owner of the high speed launch Silver Star.

The Hartford Yacht Club has also voted to seek admission to the American Power Boat Association, that the club may benefit by the racing formulas propounded by that organization, and if elected to membership its club will be entitled to four delegates, of whom the three yachtmen mentioned above will likely be chosen to represent the club. Indiana

tions are for a big season in high speed boat racing. The Connecticut river, 60 miles to open water, with plenty of depth, and without much current, represents the ideal cruising water for racing these boats and the opening regatta will have entries from all over the east.

Thomas H. Smith, of the Saunders-Smith Yacht Yard at Essex, is putting up a 33-foot high speed boat into which a 20-horsepower Buffalo motor will be installed. Commodore Smith's partner, Saunders, was formerly master boat builder for the Herreshoffs, and it is expected the new craft will be about the fastest thing of her inches afloat in eastern waters. In construction she is as light and delicate as a canoe and is built on very fast lines.

### MOTOR BOATS IN ENGLAND

Long before motor cars were to be seen running on English roads small launches, ferries, and even tugs were abroad, being somewhat commonly employed and driven by gasoline motors, essentially the same in fundamental principles as the road-going motor car of today, says the Cycle and Motor Trader of England.

But by reason of the fact that English legislation prevented the use of the gasoline driven motor on the roads the other possibility of its use on water did not receive the attention it deserved, and except for experimental purposes, the four-cycle motor as applied to floating craft may be said to have been practically unknown until quite recently, and when the road vehicle had been the means of suggesting the possibilities of motoring on water as well as on land.

It is true that in river work the launch, whether it be steam or gasoline driven, must follow the course of the water, whereas on land the motor vehicle may proceed in any direction; but a sea-going launch capable of coasting work offers a far wider field and variety of scenery, because it is also—if not too deep in draft—equally suitable for river work, so that between coast and river there are few points that cannot be reached by water, and although the land motor vehicle is, of course, infinitely superior in speed, for mere pleasure quite the same or even greater exhilaration is to be obtained from a trip in a fast motor launch.

Now, since the popularization of the motor car in this country, quite a number of wealthy owners of road cars who reside near navigable rivers or sea-side resorts have added a motor launch to their equipment, and others who had previously run steam launches have, by reason of their superior understanding of the gasoline launch, resulting from experience of the gasoline car, sold out steam launches to be replaced by the gasoline launch. Until the advent of the successful road vehicle driven by the gasoline motor steam was the only practical motive power for small launches—in this country—for although electricity is the ideal thing, the difficulty lies in the absence of charging stations to supply current for long trips, this mode of propulsion being practically confined to the Thames, except for short out-and-home runs. Then, again, the initial cost and subsequent up-keep of an electric launch is far in excess of steam or gasoline systems. So for practical purposes it is a matter of comparative cost of steam or gasoline and the attendant advantages or disadvantages.

To enter into every point of comparison would occupy far more space than the limit al-

lowed this contribution, but some of the leading items may be enumerated.

The steam launch of average construction is noisy, smelly, dirty and displays quite a number of other objectionable features, in so far as passengers are concerned, and if these features are to be to some extent eliminated, it can be accomplished only at a capital outlay quite out of proportion to the increased power and comfort, and there is always the necessity of providing skilled and constant attention to the high-pressure boiler.

The one advantage of the steam launch is that there is less chance of being absolutely stranded through machinery going wrong, always provided the entire construction is good and the boat in charge of a competent man.

But then compare this with the gasoline motor. The first expense is trivial by comparison; that is, for the moderate speed pleasure craft; there is no waiting to get up steam; the entire motive power occupies no more room than the steam engine itself, and so saves the space occupied by the cumbersome boiler, with its attendant heat and varied aromas.

The gasoline supply may be almost unlimited with a proper arrangement of tanks, and the horsepower economy is greatly in advance of steam produced from coal and the weight of fuel loss.

Then comes the great matter of cleanliness. In the best-designed steam launch it is not possible at all times to avoid falling smuts and escaping steam; the gasoline launch, on the other hand, is practically as clean as electricity.

Another very great advantage, as apart from the cost per brake horsepower, is the ease of installation and wide range of adaptability to suit circumstances and boat capacity. Then, as to actual driving, there is none of that strain on the nerves associated with the road vehicle, none of the necessity for complicated manipulation and instantaneous action in case of emergency, for in narrow waters few craft will be encountered, and in wide reaches or coast work the motor once running may be left pretty well to itself, and only the man at the helm need trouble.

The doing of Mr. Edgo's launch Napier in Ireland and again in the Solent last summer will be fresh in the minds of many of our readers, and in the coming summer there is to

be a plethora of motor launch racing events in most parts of Europe and in America, but it is hardly in the direction of those speed instruments that our remarks are directed, though they will, of course, do much to forward the general movement of motor launching just as the racing cars have done for the development and perfection of the touring motor car of moderate power.

Such launches as will take place in the principal events this year may be likened to Gordon Bennett racers, but the class of launch which will approximate to the 4½-horsepower voiturette is, in our opinion, a coming thing commercially, and, leaving out the mere speed factor—which for river work is no great advantage in promoting pleasure—it is astonishing how many people may be comfortably seated in a 24-foot gasoline launch and enjoy a degree of freedom in movement, a sense of roominess, an entire absence of vibration as compared with the road vehicle.

Then there is the vexatious new act to consider. On water there is no numbering in the motor car sense, no police traps, no speed restriction, no heavy fines, and, in fact, a degree of freedom and sense of undisturbed and uninterrupted power quite foreign and unknown to the harassed land motorist of today.

### MOTOR BOAT NOTES

The Flat-Vingt-et-Uns match will be held in June instead of in May, as originally intended.

The builders of a 60-foot boat, soon to be launched on the Harlem river, New York, figure on a speed of 35 miles an hour.

The Standard Automobile Co. will sell Bisoldi motor boat engines and a French engine, but will not go into complete boats. Mr. Blaisdell reports many inquiries for automobile boats and engines.

There are now so many fast motor boats already built or building in this country that the elimination trials for the Harmsworth cup will likely have from eight to twelve entries, with some prospect of fast time and an American record established.

Dr. Robert Taylor, originator and director of the recent motor boat show at Herald Square hall, New York, announces that the second annual exposition will be held February 5 to 18, 1905, and that already fifty manufacturers of boats, motors and auxiliaries have pledged themselves to rent space.

So strong has the motor boat section of the Jackson Park Yacht Club of Chicago grown that this division has held a meeting and intends having something to say about affairs in the future. Arrangements have been made for a series of races for the coming summer, the first to take place Decoration day. The club is endeavoring to have the park authorities set aside a part of the lagoon west of the yacht harbor especially for motor boats, inasmuch as the harbor is already crowded with yachts.

The first motor lifeboat ever built in France has just been launched at Port La Rochelle. The boat is propelled by a 12-horsepower engine, in which petroleum is used for fuel, and is credited with a speed of 25 miles an hour. Part of the equipment consists of a lot of new life belts. There have just been invented and the initial experiments have proved them to be vastly superior to the old-time life belts, made of sections of cork sewed in canvas bags. The new belt consists of a broad sash in which there are four air-tight packets.



MOTOR BOATING ON THE SEINE



# AMERICAN MOTOR LEAGUE

## OFFICERS:

ISAAC B. POTTER, President,  
Potter Building, New York.  
CHARLES E. DURYEA, First Vice-Pres.,  
Reading, Pa.  
W. GRANT MURRAY, Second Vice-Pres.,  
Adrian, Mich.  
B. W. MERRILL, Third Vice-Pres.,  
154 Nassau St., New York.  
ROBERT L. STILLSON, Secretary,  
150 Nassau St., New York.  
FREDERICK B. HILL, Treasurer,  
32 Bedford St., Boston.

National Headquarters:  
150 Nassau Street, New York

## THE NEW ROAD BOOKS

This is the fertile field of league work. Last week this page was given up to the index map of one of the central New York sections. Each route on the index map is separately numbered. These numbers refer to corresponding detail maps of which one or more are given to each route. The detail maps are prepared on an admirable plan, showing distances from point to point; marginal memoranda indicating grader, quality of road surfaces, soils, etc. For motor cyclists and wheelmen the map pages point out the sections where side paths may be used and branch routes to important points are shown at points where they intersect the main route.

### WILL BE THREE BOOKS.

Of course there will be more, later; but the league will issue three to begin with. They cover eastern New York; central New York and western New York—with through routes running to Boston, Philadelphia and other large towns in adjoining states. It is the purpose of the league to publish sample maps in these pages, showing what is being done and to invite criticism and corrections. It is not to be assumed that these maps are absolutely perfect but that they are immeasurably better than any maps or books ever before printed for the use of automobilists will be admitted by everybody.

### EASTERN NEW YORK BOOKS.

This book will contain maps and text covering about five thousand miles of popular routes in eastern New York, western Vermont, Massachusetts and Connecticut. The routes run westward to a line west of Ogdensburg and west of Oneonta, and extend the entire length of the state from Canada to New York city. From the metropolis routes to Boston and intermediate towns will be shown in the easterly direction, while from the same point routes throughout New Jersey, to Philadelphia, Trenton and other prominent points will be included. North of Poughkeepsie the work has been done with the same thoroughness that characterizes the attention given to the metropolitan district, as the following list of route maps north of Poughkeepsie will show:

Poughkeepsie to Hudson, 49.9 miles, four maps.  
Albany to Poughkeepsie, 76.9 miles, four maps.  
Albany to Albany, 61.1 miles, four maps.  
Poughkeepsie to Albany, 76.9 miles, four maps.  
Poughkeepsie to New Paltz, 24 miles, two maps.  
Poughkeepsie to Fine Falls and Gallatinville, 24 miles, two maps.  
Troy to Hudson, via Stephentown, 87 miles, three maps.  
Albany to Grand Barrington, Mass., 49.9 miles, two maps.  
Albany to Pittsford, Mass., 56.24 miles, one map.  
Albany to Williamstown, Mass., 36.50 miles, one map.  
Albany to Williamstown, via Green Valley, 41.64 miles, two maps.  
Pittsford, Mass. to Bennington, Vt., 42.5 miles, three maps.  
Troy to Bennington, Vt., 35.25 miles, one map.  
Troy to Fort Edward, 49 miles, two maps.  
Albany to Niverville, 19.25 miles, one map.  
Troy to Saratoga Springs, 20.0 miles, two maps.  
Troy to Lake George, 24.5 miles, three maps.  
Albany to Averill Park, 21.48 miles, one map.  
Albany to Saratoga Springs, 38.54 miles, two maps.  
Albany to Ballston Lake, 22.4 miles, one map.

Troy to Schenectady and return, 40 miles, one map.  
Albany to Watford, 11.5 miles, one map.  
Albany to Coxsack, 23.0 miles, one map.  
Albany to Middleburg, 42.58 miles, three maps.  
Albany to Freehold, 52.20 miles, one map.  
Kingston to Oneonta, 98.44 miles, four maps.  
Albany to Richfield Springs, 57 miles, three maps.  
Schenectady to Richfield Springs, 57 miles, three maps.  
Albany to Oneonta, 81.75 miles, three maps.  
Albany to Little Falls, 73.14 miles, three maps.  
Schoharie to Amsterdam, 31.1 miles, one map.  
Collins to Fort Plain, 43.50 miles, two maps.  
Amsterdam to Northville, 24 miles, one map.  
Pond to Northville, 20 miles, one map.  
Northampton to Glens Falls, 36.20 miles, one map.  
Glens Falls to Whitehall, 21.25 miles, one map.  
Saratoga Springs to Lake George, 32.70 miles, one map.  
Lake George to Ticonderoga via Schenck Lake, 50 miles, two maps.  
Lake George to Long Lake, 61.0 miles, two maps.  
Ticonderoga to Plattsburgh, 72.50 miles, three maps.  
Plattsburgh to Rouse's Point, 23.75 miles, one map.  
Plattsburgh to Rouse's Point, 27.50 miles, one map.  
Plattsburgh to Brandon, 94.15 miles, three maps.  
Plattsburgh to Paul Smith's, 52.67 miles, two maps.  
Plattsburgh to Potsdam, 80 miles, three maps.  
Rouse's Point to Elizabethtown, 27.40 miles, one map.  
Malone to Brandon and Leon Lake, 67.50 miles, one map.  
Westport to Keene Valley, 21.50 miles, one map.  
Arkville to Delhi, 26.50 miles, one map.  
Salem to Oyster, Vt., 40.15 miles, one map.  
Arlington to Rutland, Vt., 60.55 miles, three maps.  
Rouses in Sullivan County, 200 miles, one map.  
Albany to Kinderhook, 20.50 miles, one map.  
Williamstown, Mass., to Dover Plains, 80 miles, three maps.  
Rhinecliff to Great Barrington, Mass., 52.60 miles, three maps.

Besides the foregoing there are thirty other routes north of Poughkeepsie covering an aggregate of about 1,400 miles.

### CENTRAL NEW YORK.

This book will contain eight double map pages and 124 single map pages, and will cover routes aggregating about 3,000 miles. Some of the principal maps are as follows: Two index maps; map of Syracuse, showing best streets and pavements; vicinity of Syracuse, showing good roads in surrounding country; Oswego and vicinity, showing outline roads; map of Utica, showing best streets and pavements; map of Binghamton, showing best streets and roads; vicinity of Binghamton, showing routes in surrounding country; vicinity of Elmira, showing routes of surrounding country; map of Auburn, showing best streets and pavements; Syracuse to Little Falls, Utica to Watertown, Oneida County to Watertown, Watertown to Potsdam, Watertown to Sacketts Harbor, Watertown to Cape Vincent and Clayton, Oneida to and around Oneida Lake, Binghamton to Utica, Syracuse to Richfield Springs, Afton to Greene, Binghamton to Oneonta, Binghamton to Hancock, Oneonta to Norwich and Lebanon, Binghamton to Susquehanna, Pa.; Susquehanna, Pa. to Harrisville, Binghamton to Scranton, Pa., Binghamton to Delaware Water Gap, Binghamton to Montrose and Heart Lake,

## CHAIRMAN OF NATIONAL COMMITTEES:

LEGISLATION—George R. Bidwell, New York, N. Y.  
ROAD IMPROVEMENT—R. E. Goff, Lansing, Mich.  
LOCAL ORGANIZATION—Charles F. Potter, Denver, Colo.  
TOURING—W. H. Baker, Buffalo, N. Y.  
TECHNICAL—Charles E. Duryea, Reading, Pa.  
MEMBERSHIP—Frank A. Egan, New York, N. Y.  
SIGN BOARDS—John B. Price, Hazelton, Pa.  
RACING—A. O. Barchelder, New York, N. Y.  
PRES.—Joseph Escotot, Philadelphia, Pa.  
HOTELS—Francis N. Bain, Newburg, N. Y.

# OFFICIAL BULLETIN

Binghamton to Quaker Lake and Silver Lake, Binghamton to Corning, Oswego to Cortland, Binghamton to Maine and Newark Valley, Whitney Point to Union, Binghamton to Whitney Point, Binghamton to Cortland, Binghamton to Willett, Binghamton to Greene County, Greene to Upper Lisle, Binghamton to Houckville, Cicatinatus to Syracuse, Cortland to Cicatinatus, Cortland to De Ruyter, Syracuse to Georgetown, Syracuse to Watertown, Syracuse to Oswego, Oswego to Texas, Mexico and Pliskis, Syracuse around Onondaga Lake and to Baldwinsville, Syracuse to Auburn, Syracuse to Lyons, Syracuse to Geneva, Auburn to Fair Haven, Syracuse to Auburn, Cortland to Syracuse, Freebo to Amber, Tully to Skaneateles, Ithaca to Syracuse, Tully Centre to Syracuse, Cortland to Moravia, Dryden to Auburn, Ithaca to Auburn, Ithaca to Cayuga, Ithaca to Waterloo, Farmer to Seneca Falls, Sheldrake to Seneca Falls, Ithaca to Watkins, Corning to Geneva, Elmira to Ithaca, Waverly to Ithaca, Elmira to Canaan, Pa., Nichols and Waverly to Canton, Pa., Nichols to Towanda, Pa., Oswego to Ithaca, Binghamton to Ithaca.

### WESTERN NEW YORK.

The western New York book is similar to the others in every essential respect and will include eighty-five single map pages and three double map pages, covering a total of about 4,500 miles in roads and streets. The maps include the following: Two index maps; one map of Buffalo, showing the best streets; map of Rochester, showing best streets; vicinity of Rochester, Buffalo to Rochester, three separate routes; Buffalo to Grand Isle, Niagara Falls and Youngstown, Buffalo to Olean, Buffalo to Cheektowatch, Buffalo to Mt. Morris, Buffalo to Attica, Buffalo to Warsaw, Buffalo to Olean, Buffalo to Portageville, Buffalo to Salamanca, Buffalo to Jamestown, Towanda to Salamanca, Buffalo to Erie, Pa., Dayton to Dunkirk, Jamestown to Dunkirk, Jamestown to Westfield, Buffalo to Dunnville, Ont., Buffalo to Niagara, Ont., Rochester toodus Point, Rochester to Lyons, Rochester to Canandaigua, Rochester to Avon, Canandaigua to Geneva, Rochester to Bath, Corning to Geneva, Bath to Pennung, Bath to Canandaigua, Canandaigua to Jamestown, Rochester to Wellsville, Batavia to Horseville. Thirty other popular routes reaching all of the interesting and attractive points in western New York. The space on this page is insufficient to fully describe contents of these books.

### FREE TO LEAGUE MEMBERS.

Every member of the A. M. L. residing in the territory covered by these books will receive a free copy of the book covering the town or county in which he resides. Every other member of the league will be entitled to either of the three books selected by him if requests be made by him by mail. Members desiring books to which they are not entitled under the free distribution plan, will be entitled to one copy of each book at 50 cents per copy. Price to non-league members will be \$2 per copy.

# MOTOR AGE

VOL. V. NO. 12

MARCH 24, 1904

\$2.00 Per Year

## SELL TO POLITICIANS AND DIPLOMATS



**W**ASHINGTON, D. C., March 21—The opening of the automobile show in the armory of the Washington Light Infantry this evening was marred by a steady down pour of rain, which dampened the ardor of even the most enthusiastic automobilists. This is the fourth show to be held here and the third given under the auspices of the Washington Automobile Dealers' Association. In number and variety of exhibits it is far ahead of its predecessors and if the promoters are fortunate enough to have good weather during the remainder of the week there will undoubtedly be a great outpouring of Washington's best people to see the latest developments in the automobile world.

Washington, the capital of the greatest of all nations, has among her residents famous diplomats and literary folk from all parts of the world, the most brainy statesmen, politicians, and men famous in all walks of life. It is this class of people the dealers hope to interest in the subject of automobiles and as a means to this end special invitations with admission cards to the show have been sent to more than 3,500 of the best known people.

The show is purely a local affair and is in no sense a money-making scheme, the dealers being satisfied if the receipts pay the bills.

The armory never presented a finer appearance when the doors were opened this evening. The electrical effects were particularly striking, added to which a lavish use of bunting and flags makes a picture that is very pleasing to the eye. An orchestra stationed in the gallery played throughout the evening.

Early today it looked as if the show would have to be indefinitely postponed, owing to the refusal of the municipal authorities to grant the promoters a license. It appears that the armory is under the ban of the police on account of certain violations of the regulations governing places of amusement. Manager Washington finally succeeded in fixing up the matter by agreeing to appear at the police station each evening and leave \$10 collateral, which he will forfeit by not appearing in court. The situation confronting the promoters was very embarrassing for a time.

The only new thing shown here is the latest model of the Oldsmobile runabout, which sells for \$630. It has a 6-horsepower engine

and is somewhat larger than the usual Oldsmobile runabout. The body and seat are  $\frac{1}{2}$  inch wider, and the crank shaft and transmission gear are heavier. Three-inch tires are used.

The Washington branch of the Pope Mfg. Co. is showing the full Pope line, including the Pope-Toledo four-cylinder touring car, Pope-Tribune and Pope-Hartford, together with the Waverley electric and Cadillac. The Rambler motor cycle is also shown.

The National Capital Automobile Co. shows the Oldsmobile runabout, touring runabout, tonneau touring car, and the Oldsmobile railway inspection car. It also shows the Franklin.

A. L. Kall & Co., successors to the Edison Automobile station, show the Ford car.

Studebaker and Buffalo electricies are shown by the Automobile Storage & Repair Co. The sundry display includes Gray & Davis lamps, champion accumulators and Fawkes tires.

Howard A. Rhine & Co. are showing the Haynes-Apperson car and Yale motor cycles.

The Thomas three-cylinder flyer is exhibited by the Baltimora Motor Car Co. The company expects to open a branch here.

A. L. Cline & Co. show the Rambler in three models, L, H and E, and the Baker electric stanhope and runabout.

Maryland Automobile Co., agent for the



A Corner of the Horticultural Hall, Boston, Showing Style of Decoration

Knox in Washington and Baltimore, show the Knox chassis, which was a feature of the Knox exhibit in the New York show, together with a Knox surrey and runabout.

The Woods Motor Vehicle Co. shows an electric victoria, stanhope and landaulette. These cars are handled here by the Automobile Storage & Repair Co.

An Acme touring car, Reading steamer and Clement motor cycle form the exhibit of Charles E. Miller & Bro.

One of the largest and finest exhibits is that of F. A. La Roche & Co., of New York. It consists of the Darracq chassis shown at Paris and New York, a Darracq king of the Belgians touring car and another touring car. The chassis is shown over a mirror and was always a center of attraction.

Cook & Owensby, of Washington and Baltimore, have a large exhibit consisting of a Winton touring car, White steamer, Stevens-Duryea and Orient Luckboard.

The Washington Electric Vehicle Transportation Co. shows a Columbia 24-horsepower gasoline touring car, Columbia 24-horsepower bout and Columbia electric victoria.

A big line of automobile accessories are shown by the National Electrical Supply Co. Included in the exhibit are Jones speedometers, Veeder odometers, Whitney chains, Diamond and Continental tires.

The United Electrical Mfg. Co. shows a line of Crescent dry batteries.

The Chautauquin Lightning wrench is shown by William Hjorth, of Jamestown, N. Y.

Saks & Co. show automobile clothing for both men and women, together with a big line of sundries.

The Schuam Automobile Co., of Baltimore and Washington, shows a 16-horsepower gaso-

line touring car that is just being put on the market. It sells for \$1,500.

The Severout lamp is shown by the Rose Mfg. Co., of Philadelphia.

Washington is rapidly becoming a great field for the sale of automobiles and the show now in progress will undoubtedly stimulate interest. Adjacent to the armory is the White House ellipse, where the demonstration cars can be used to good advantage.

#### BEST EVER HELD IN HUB

Boston, March 21.—The recent automobile show in this city netted a handsome sum for the Boston Automobile Dealers' Association. Not only that, but the show caused the transaction of something like \$50,000 worth of business during its progress, and no small amount of business will certainly be done later as the result of the exhibit. No show has ever been held in this city which has proven of so great a value to the automobile industry and to the individual dealers. All week long business was transacted by every one of the dealers, much to their satisfaction and the swelling of their bank accounts. In the opinion of many who have attended all the local shows of the year, the Boston exhibit stands pre-eminently at the head.

The chief features were chronicled in Motor Age last week, and there was nothing during the week which caused a change in the statement made then that this was the greatest show ever held in this city. During the exhibition many of the most prominent automobile manufacturers and managers visited Boston and her show. Alexander Winton, accompanied by C. B. Shanks and Percy Owen arrived in the city on Monday, this being Mr. Winton's first visit to Boston dur-

ing the past 20 years. They were given a rousing reception and remained here for a couple of days.

Now that the show is closed and is a thing of the past talk about next season is being indulged in. Eleven dealers united in the expectation that even with Sympony and Horticultural halls, the exhibition at the command of the association is too limited, and the opinion is expressed that a year hence the exhibit will be held in Mechanic's hall, which is the largest obtainable building in this city. There is no question that it is much better to place all exhibits under one roof than to divide them between two halls, which naturally causes more or less confusion among visitors, as well as no end of trouble for the management. Manager Campbell, who had charge of the exhibition, is today receiving the congratulations of every one who had anything to do with it. The show committee, consisting of W. E. Eldridge, Harry Fosdick and George H. Lowe, is likewise to be congratulated for its excellent work.

As a result of the recent visit of F. A. La Roche to this city, a Boston branch of the Darracq has been established here. Mr. La Roche appointed Kenneth A. Skinner as his Boston agent, and hereafter the Darracq will find a good home in his garage, as well as places in the private garages of some of the best known Bostonians.

During the show orders were received for half a dozen Napier of the six cylinder variety, the great majority of which are to be delivered abroad. C. J. Glidden, George W. Merrih, Otto B. Cole, and Harry D. Corey are four of the gentlemen who have placed orders for the six-cylinder machines, all of

which are to be delivered to them in London, as they are going to Germany to witness the Gordon Bennett international cup race.

W. H. Stimson has accepted the agency for the Eldredge car and has established his headquarters on Columbus avenue.

The Massachusetts Automobile Club is to hold a race meet at the Readville track May 30, the sanction having been received from the racing board of the A. A. A., and the track having been leased by the club. This sets at rest all statements as to whether or not there will be a race meet there this season. At one time it looked as though the club would let the meet go by the board, but the moment the racing committee for the year was appointed by President Elliott, work was commenced towards the holding of one. Chairman Wallace went to work with a will, and last week announced that the annual competitions would be held and that there would be special races for particular makes of cars. He also stated that the hill climbing contest will be held on Commonwealth avenue hill on Patriots' day, which insures the holding of two big outdoor automobile events of the year. During the show Mr. Wallace interviewed the majority of the visiting makers and secured from them the promise of entry of their machines for these two contests.

During the week of the show a meeting of the delegates from the leading clubs in New England was held at the rooms of the Massachusetts Automobile Club, at which the New England Automobile Association made arrangements for the tour from Boston to St. Louis during July. The officers elected were: Chairman, Charles J. Glidden; vice-chairman, L. H. Greenwood; secretary, J. C. Kerrison, and treasurer, Frederick R. Tibbitts.

The following itinerary for the St. Louis trip has been roughly prepared, subject to slight changes:

Monday, July 25—Leave Boston from Copley square at 9 o'clock. Lunch at Worcester—45 miles—where Providence, New Bedford, Marlboro, Brockton and Fitchburg clubs will join the run. Continue to night stop at Springfield—107 miles.

Tuesday, July 26—Leave Springfield from in front of headquarters at Massasoit hotel at 9 o'clock. Lunch at Pittsfield—53 miles. Continue to night stop at Albany—92 miles.

Wednesday, July 27—Leave headquarters at Ten Eyck hotel at 9 o'clock. Lunch at Fonda—45 miles. Night stop at Utica—100 miles.

Thursday, July 28—Leave headquarters at Bagg's hotel at 10 o'clock. Lunch at Chittenango—34 miles. Side trip through White Sulphur Springs to Cazenovia—10 miles—if

desired. Continue to night stop at Syracuse—50 miles.

Friday, July 29—Leave headquarters at Yates house at 9 o'clock. Lunch at Lyons—47 miles. Night stop at Rochester—82 miles.

Saturday, July 30—Leave headquarters at Powers' hotel at 9 o'clock. Lunch at Batavia—35 miles—where the New York section joins the run. Proceed with it to night stop at Buffalo—73 miles. Total run for the week, 504 miles.

Sunday, July 31—Stop in Buffalo, with optional side trip to Niagara Falls—25 miles—with lunch there and return in the afternoon.

Week beginning Monday, August 1—Proceed with the New York section as per main line route through Erie—94 miles, Cleveland—110 miles, Toledo—123 miles, Waterloo—93 miles, South Bend—76 miles, to Chicago—102 miles—where Sunday, August 7, will be spent. Total run, Buffalo to Chicago, 593 miles.

Week beginning Monday, August 8—Continue through Bloomington—126 miles, and Springfield—60 miles, to St. Louis—102 miles, arriving there Wednesday night, August 10. Total run, Chicago to St. Louis, 258 miles.

Thursday, August 11—Grand parade through the city and fair grounds to some point in the grounds where the cars will be stored.



The Exhibition in Symphony Hall, Boston



# MOTOR AGE

Published Every Thursday by  
THE TRADE PRESS CO.  
1303 MICHIGAN AVENUE CHICAGO  
Telephone Columet 7011

New York Office, 114 West 18th Street,  
London Office, American Publication Bu-  
sness, 18 Manor Park Rd., Haringey, N. W.





Entered at the Chicago Post Office as Second  
Class Mail Matter

Subscription, Two Dollars per Year  
Foreign Subscription, Four Dollars

Any Newsdealer may obtain Motor Age through  
the Western News Co., Chicago, on any  
of its branches, on a returnable basis

The season of automobile shows is over. At the national capital the circuit is ended. The exhibitions have all been successes. At least the exhibitors say they have been. There is now a great interest in automobilizing. All the various shows have proved its being. The attendance has been remarkable. Automobiles are wanted by all the people. The shows clearly indicate this demand. A good rest has been earned by the trade. The rest, tho', is a relief and a satisfaction. Automobilizing has learned its greatness.

The city attorney of San Francisco has rendered an opinion which is interesting whether of value or not and which opens a question of close distinction. He says that if an automobile is sold upon the statement that it will run, say, 20 miles an hour, it must not only be able to run at the rate of 20 miles an hour for 1 mile, but must be actually capable of negotiating the full 20 miles in 60 minutes if the purchaser is held to his agreement. Such a meaning put upon common claims, if backed by legal decision, might work a hardship here and there, but it might also tend to lessen extravagant claims of overenthusiastic salesmen. A ruling of the kind, however, might cause endless wrangles over the conditions of travel under which the prescribed mileage should be made and over the degree to which accident and other unforeseen contingencies should be considered.

Every once in a while some one breaks into speech or print with an appeal for more carefully selected terms pertaining to what we now improperly and with great disfavor for the consistent derivation of words call the automobile industry. The peculiar feature of the situation is that words will be what the public makes them, regardless of what the critics think they should or should not be. It is really immaterial whether we call the modern vehicle an automobile, a motor car or a pell. Such names at best will last only as long as they are a class by themselves, on account of the character of their power. After several years the purchaser of a vehicle will walk into a carriage emporium and say, "I wish to look at a doctor's stanhope." The salesman will ask, "Gasoline or electric?" just as he might now ask, "For one horse or two?"

Carriages will always be carriages; wagons always wagons, and theater busses and furniture vans likewise. The character of their power will cease to classify; it will only qualify. If there ever comes a time of universal motive power it will cease to exist in the nomenclature of the vehicle trade. It would have been foolish 25 years ago for a man to have stepped into some big carriage repository and asked for a horse-drawn victoria. It will be just as foolish 25 years from now to walk into a vehicle store and ask for a motor surrey. He will ask for a gasoline surrey or an electric surrey or a steam surrey.

Madame du Gust is mmd. She is shut out of the French eliminating trials because she is a woman; out of the English trials because they are to be run on the Isle of Man; and out of the German trials because she is French. Never mind, madame; there may be a chance to get onto one of the international cup race teams as chaperone.

By April 1 there will be just half as many American automobile papers in the country as there are American manufacturers in the Association of Licensed Automobile Manufacturers. When the A. L. A. M. has put a quetus on all outsiders its members can then pair off into teams with a paper apiece!

For versatility it is hard to beat John Farson, C. A. C., A. A. A., A. C. A., A. M. L., of Chicago. Servant girls, acchieks, church lazanars, automobile shows, automobile driving, good roads—it is all alike to him in discussing the subject with keen wit and graceful rhetoric.

Automobile Topics announces that from pure love of the industry it will boost it along with an issue of 50,000 copies. Either the industry, the second-class matter division of the postoffice or Topics is going to be very much fooled.

Now that the Europeans have been convinced that Willie K. really did make that mile in :39, they are beginning to remember lots of unofficially timed practice spins they have made in :36, :37 and :38.

Governor Yates, of Illinois, in writing on the topic of road improvement, says he is not aware that the movement has taken definite form in his state. Nor will it ever take form, Governor, unless somebody wakes up!

If anything will remove the solemnity of the Egyptian sphinx it will be the automobilist wrestling with a bad case of ignition, poor carburation, or some other equally aggravating cause for stopping.

Up to the hour of going to press the eastern press representatives had not consolidated the A. A. A. and any other organization for an entire week.

President Potter of the A. M. L., having recovered from the transportation fever, is now saving wool, just by way of exercise.

Now that the Association of Automobile Engineers has been formally organized we may hope for standardization once more.

The Chicago dealers have resolved to refrain from giving any discount to either the weather

man or the ground hog. Motorists in general approve this action.

One to 20 Jenatz against the field—how does that sound?

Would it be consistent for a horse doctor to use an automobile in his practice?

The eastern automobile-boat press agents have been losing their holds of late. Has the novelty worn off so soon?

If the state of Illinois abandons the old Illinois and Michigan canal, which extends from Chicago to La Salle, Ill., why not turn it into a state boulevard?

The unfortunate automobile world girdlers who abandoned their trip and their misnamed Passe Partout in Siberia can now sympathize heartily with the Russian government.

The race course for the German international cup race eliminating trials passes through Hahnbergung bei Lockstedter Lager. That ought to eliminate all of the contestants.

The automobile has come to stay. There is no doubt of it. MOTOR AGE last week received three "stories" from would-be contributors, two catalogues, one postal card and one prospectus of an automobile school, the first sentence of each of which was that very clever statement.

Representative Sibley, of Pennsylvania, who is one of the several millionaires in congress, is one of the most enthusiastic automobilists in Washington. At the capitol the other day some one asked him how fast he had ever driven his Winton touring car. "Up in Pennsylvania one day last summer," he said, "I rode so fast along a narrow road, upon one side of which was a corn field and on the other a field of beans, that the auction of my lig car literally covered me with succotash."

It is worth while to read the official bulletin of the American Motor League in MOTOR AGE. The A. M. L. is an organization whose works depend upon its strength. Its strength depends upon its membership. Its membership depends upon interest. The official page is conducted by the league to arouse interest in those who are not members and to sustain interest in those who are members. It tells of the work of the league. An automobilist helps himself by helping in the work of such organizations as the American Motor League. He should be interested in it.

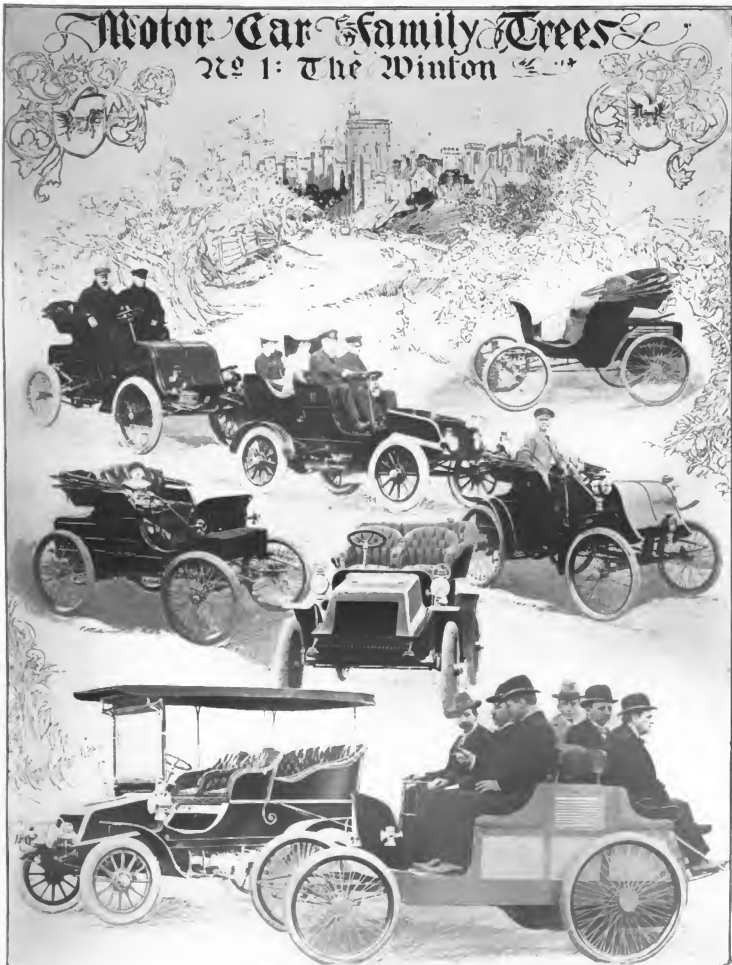
St. Louis has a \$10 license fee for automobilists.

It is not only outrageously unjust and illegal, but apt to do the city and the fair an injury.

The motorists of St. Louis are few in number and apparently somewhat inactive in permitting this objectionable ordinance to remain in full force and effect.

If the many automobile tours scheduled to land in the exposition city are to be anything but mere nothings the fair officials and the motorists of St. Louis must become more active than they are at present.

The great cravans of motor cars will be immense advertising mediums; the industry demands that they shall not be interrupted by a senseless ordinance, and the makers should join hands with the motorists and fair officials to kill the law, temporarily, at least.



The 1901 Wagon Steer Phaeton  
 The 1899 Phaeton  
 The 1904 Canopy Top Touring Car

The 1904 Touring Car  
 The 1904 Touring Car

The First Car Placed On the Market 1895  
 The 1901 Lever Steer Phaeton  
 The First Practical Winton Motor Carriage



# WASHINGTON THE MOTORIST'S PARADISE



Looking North from Department of Agriculture



MOTOR AGE



Looking West from the Capitol

**W**ASHINGTON, D. C., March 10—Washington, the city of magnificent distances, and capital of the nation, is a great automobile center, and the advantages enjoyed by the devotees of the motor car compare favorably with those of other great cities. The popularity of the automobile has increased a hundredfold during the past 2 years and the motorists are now a recognized factor in municipal affairs.

The capital has many miles of asphalt pavement and ranks near the top in the list of cities with the greatest area of this surface. The plan of the city is symmetrical. The Capitol and white house are two centers from which radiate broad avenues. The streets vary in width from 80 to 160 feet, and many of them are completely arched by trees throughout their entire length; the motorist can ride for miles over smooth asphalt pavements of one street after another, and, looking straight before him, see the long perspective of green arches running away into the sky in the distance. Pennsylvania avenue is the great artery of the city; it is nearly 5 miles in length, and has been the scene of many notable parades. This great thoroughfare is filled with machines at all times and it is by riding up and down the avenue that one can get a good idea of how many automobiles are in daily use here.

The public park system of Washington, while it is not very great in extent, is artistically laid out and affords some interesting rides for the motorist. That part of the park system extending from the capital to the Washington monument and known as the mall, embracing the grounds of the botanic gardens, national museum, Smithsonian institution, and agricultural department, is a favorite ride. The roads are all of the smoothest macadam and at intervals there are delightful shady nooks. The mall terminates in an ellipse at the rear of the white house. This ellipse is  $\frac{1}{4}$  of a mile in circumference and the surface is as smooth as asphalt. An effort has been made to have this ellipse set aside for the exclusive use of the automobilists for speeding purposes, but so far the privilege has not been granted. Automobilists congregate on the ellipse in numbers every Saturday afternoon to hear the concert rendered in the president's grounds by the United States marine band.

The environs of the capital afford a number of interesting and picturesque rides. One that attracts many automobilists is the soldiers' home. The grounds comprise about 500 acres of beautiful diversified hill and dale, to which the public has free access at all times. There

are more than 7 miles of broad, well-made drives, shaded with gigantic oaks with luxuriant foliage. Silvery lakes are interspersed with stretches of meadow and picturesque arbors on the hills give charming vistas of the landscape for miles around, while pretty villas and stately add to the beauty of this park.

A half-hour ride from the capital through a picturesque country brings the automobilist to the quaint old town of Bladensburg, which was founded in 1750, and named after Thomas Bladen, at one time governor of Maryland. Here, in 1814, General Ross brought up his flotilla, and the English reboots, after sailing up the Anacostia river, disembarked just below the bridge and advanced toward the capital. A little to the right, before reaching the bridge, is the ground that often witnessed meetings made necessary by the "code of honor." Some duels that are famous in history were fought on this ground. The ride to this old-fashioned place is a very enjoyable one.

About 2 miles from the city lies Rock Creek park, a vast tract of land owned by the government, which is being slowly improved. When it is completed it will be one of the finest parks in the country. South of the park are the grounds of the zoological gardens, which are laid out in finely graded roads that are the joy of Washington automobilists. The scenic beauty of the zoo is unsurpassed and when it is fully completed it will rival the famous Fairmount park in Philadelphia.

A ride that attracts many notable automobilists is that to Chevy Chase, a beautiful suburban place in Maryland, a few miles northwest of Washington. The Chevy Chase Club, two golf clubs and a hunting club, have their headquarters there, and the favorite way of reaching the place is in automobiles.

Apart from the many objects of historical interest, the ride to Arlington presents attractions in the great beauty of the scenery;

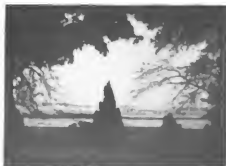
it is one of the most interesting rides in the itinerary of the Washington automobilist. Arlington, which faces the Potomac river on the Virginia side, was long famous as the home of the Custis and Lee families, two of the most notable families in Virginia history. It is now used as a national cemetery, and over 16,000 soldiers of the war are buried there. The grounds are laid out on a magnificent scale, with fine macadam roads winding in and out among the famous monuments. The view from the heights overlooking the city is a grand one. A short distance west from Arlington is Fort Myer, a cavalry post. Every Friday afternoon the troops give an exhibition of riding that is little short of marvelous, and hundreds of automobilists ride out to see the performance and hear the music of the mounted band.

Eight miles from the city on the Conduit road is Cabin John bridge, one of the most noted structures ever reared by the hand of man. The bridge, which was built by the government for the purpose of conveying the water supply to the city from Great Falls, Md., enjoys the distinction of being the largest single arch span in the world. The place derives its name from an old recluse known as John of the Cabin, who lived in a hut far away from civilization at a time when the city of Washington was an infant. The Conduit road is a government road and is always kept in excellent repair. The "bridge" is a favorite rendezvous of Washington automobilists and during the summer months hundreds of motorists ride out there every day.

Aside from the numerous haunts of the automobilists in the immediate vicinity of the city, there are many delightful rides through Maryland and Virginia that automobilists who know the joys of touring are fond of taking. The trip through the Shenandoah valley is a favorite one.

## ROCHESTER'S COMPOSITE SHOW

Rochester, N. Y., March 21—With the "hook, honk" of automobile horns that seems to have become proverbial with automobile show story writers, Rochester's first automobile show was opened in Fitzhugh hall tonight. A composite show it is and even the automobile horns could not proclaim it an exclusive motor car show, for bicycles and sporting sundries take up half of the exhibition space. The new models of motor vehicles, ranged in the center of the building, however, make a pretentious display for a small, local show, and the good natured crowd which fills the building about 8 o'clock seems to find more interest in them than in



Washington as seen from Arlington

all the other things which are on exhibition. The show is well attended and though for the most part the crowd was composed of plain, every-day seekers after amusement of some kind, there was a goodly number with a more serious turn of mind who desired to delve into the intricacies of motors, cranks and other incidental points of complicated mechanism which go to make up the automobile. Among these might be numbered the prospective buyers and as each exhibitor has a corps of competent assistants on hand to explain the incomprehensible qualities and feature adjuncts of his respective machine the visitors were well taken care of. It was reported that several sales were made during the evening.

The hall is very tastefully decorated with American flags and bunting and here and there a huge bouquet of flowers grace an automobile. In the north gallery is located a band of fifteen pieces, which plays selections every few minutes.

To entertain the proceedings the management put on home trainer bicycle contests between a couple of professional bicycle racing men. Another side show attraction was a working model of the de Forest wireless telegraphy system.

The automobile exhibit is not nearly so extensive as at the other local shows, but is fairly representative of the market inasmuch as it comprises all of the lines handled by the local dealers, a goodly quantity of parts and accessories, and several locally made cars.

The Rochester Automobile Club is on hand with a decorated booth and expects to do much recruiting during the week. The club is prosperous and anticipates a good season. The show inaugurates its summer campaign.

Altogether the exhibition is a pleasant affair—not in the running with other shows, but good for its kind and prospectively a profitable venture both for the management and the exhibitors.

#### NEW GARAGE FOR WASHINGTON

Washington, D. C., March 19—The large garage of the National Capital Automobile Club, in the rear of the company's office at 1120 Eighteenth street, has been found inadequate to the proper handling of the company's growing business, and in consequence plans are being perfected for a new garage. If the present plans are carried out this garage will be one of the finest in the country. Something like \$30,000 is to be expended and in addition to the other departments there will be reception rooms for both men and women, a library with files of the leading automobile papers, a chauffeur's room, baths, private lockers and other conveniences. Manager John Wood has several desirable sites under consideration and it is expected definite action will be taken immediately after the automobile show.

#### AFTER VANDERBILT'S RECORD

Baron Pierre de Caters has inspected different Belgian roads for the purpose of finding a suitable stretch to go after the mile and kilometer records. He has found one which is supposed to be superior, as to speed possibilities to the Dourdan road. The Automobile Club of Belgium will have the road measured, after which Baron de Caters will try to break the Vanderbilt and Dury records. He will use a new Mercedes car, which will develop from 90 to 110 horsepower.

## THE BITER WAS BITTEN

### Washington "Doctor" Given a Demonstration Which He Will Very Likely Long Remember

Washington, D. C., March 17—All Washington is laughing at the trick played on an alleged army physician by three prominent automobile dealers of this city, thereby exposing one of the rankest frauds the national capital has seen in many a day.

During the past 3 weeks the dealers have been at the beck and call of "Dr." Hicks and his women friends. The doctor ever presented an imposing appearance. He was a swell dresser and money seemed to be no object with him. He wanted to buy a car, and he had friends who would buy the same kind of car he bought.

"Dr." Hicks formerly lived here. He dropped out of sight for some time, but when he came up to a business man on the street with whom he had formerly been on friendly terms and told him he was here to buy an automobile, was staying at the leading hotel, and contemplated a tour of the country, the business man had no reason to be suspicious.

The doctor was presented to a prominent dealer, and was soon riding about the city in a fine touring car, while the dealer was explaining the many talking points of the machine. The next day another dealer was visited and another demonstration followed. The doctor made the rounds of the trade, and each dealer felt sure of making the sale. When all the dealers had taken him out the doctor became uncertain and all the cars had to be demonstrated over again.

Occasionally the doctor was permitted to take a car out himself and to take his numerous women friends on little trips into the country. Finally he consented to order a car. In fact, it was learned afterwards that he had ordered several, but each from a different dealer. In no case did he make a deposit, but always gave a plausible excuse.

Finally the dealers became suspicious. A few chance remarks of one dealer to another led to a conference, and an investigation brought to light the fact that the doctor was a rank fraud. Instead of having a suite of rooms at a prominent hotel, as he represented, it was found that he was living in a back room over an F street business house.

Then the dealers determined to have dire revenge on the impostor for the trouble he had caused them. A stormy afternoon was selected. In a canopy top Toledo touring car the three dealers rode up and down F street looking for their victim. They found him, dressed as usual in a frock coat, with a silk hat and patent leather shoes.

"Jump in, doctor," they cried. "Got a new car here and want to give you a thorough demonstration. Just the thing you want. Swell thing for the city; knocks them all out in the country."

The doctor yielded. They persuaded him to get his overcoat and then they rode out into the country. When they reached a spot agreed upon by them, unknown to the doctor—24 miles from the city, 12 miles from a railroad station, and 5 miles from the nearest house—they halted.

"Doctor, we want a picture of you in this car," they said. "It will help us in the trade." Very readily the doctor scrambled out

of the rear and took his place at the wheel. One of the party snapped his camera, but the picture was a failure. When the doctor alighted and leisurely prepared to resume his seat in the rear, the conspirators suddenly started the machine, and it was a hundred feet from the doctor before he knew what had happened. Then the spokesman of the party addressed the doctor thus:

"Doc, I'm sorry for you. You are 5 miles from the nearest house, 12 miles from a railroad station, and 24 miles from Washington, and you can't ride in this car. We're on to you. You've played us for suckers good, but you kept it up too long. Good-by." The car was started on the homeward trip just as the sun went down, with "Dr." Hicks standing in the muddy road, his fist shaking in impotent rage. The car reached the city safely an hour later, but it was 18 hours before the doctor reached the city limits, a sadder, but it is to be hoped, a wiser man. He has since left the city.

#### TOUR TO GETTYSBURG

New York, March 22—That the A. C. A. will have a club run tour next May to Gettysburg, embracing a visit to Atlantic City and Lakewood on the home journey, is now assured. The tour committee of the club met yesterday and laid out roughly a route and itinerary. The tour will last 8 days and cover about 475 miles.

The start will be made on Thursday, May 26, with Philadelphia—100 miles—for the first night's stop. York, Pa.—91 miles—will be reached the following evening, and Gettysburg—30 miles—the next morning. The tourists will spend Saturday and Sunday in visits to the battlefield. On Decoration day morning the homeward journey will begin. It is planned to reach this city on Friday, June 3. The intermediate stopping places and route in outline will be: Philadelphia, 121 miles; Atlantic City, 61 miles; Lakewood, 67 miles, and New York, 60 miles.

In view of the intention of the club to again permit an autumn tour the invitation of the A. C. A. to accompany one of its New York divisions partway on its journey was declined for fear of interference with the proposed run.

#### QUAKERS ELECT OFFICERS

The annual meeting of the Automobile Club of Philadelphia was held in the club rooms of the Manufacturers' Club last week. There was an informal discussion regarding plans for enlarging the scope of the club and making it more powerful. It is the idea of the club to co-operate with the Automobile Club of America, and to form plans for securing protection from unjust prosecution. Road maps of the state are wanted, and these will probably be obtained from the American Motor League, which is issuing maps of the kind desired. The following were elected as the board of governors: Isaac Starr, Jr., H. Bartol Brazier, Louis J. Kolb, F. C. Lewin, Henry G. Morris, J. Emilen Smith and Ellis Ames Ballard. There was only one change in the old board, Mr. Ballard being elected to fill the office left vacant by the resignation of Dr. A. D. Whiting, who declined to serve again. The time of service was fixed by drawing lots, Messrs. Smith, Morris and Lewin drawing 2-year terms and the others 1 year. A committee, with Howard Longstrech chairman, was appointed to nominate officers to be elected at the next meeting.

## TRIAL RACES ARRANGED

**Details for the English, French, German and American Gordon Bennett Eliminating Events Practically Complete—Many of the Drivers Already Named—Madam Du Gast Protests**

All racing thoughts are now turned to Ormond, where the American team trials are to be held the latter half of April. Joe Tracy has been definitely chosen to drive the Peerless car in the international cup race. Three of these cars will be taken to Ormond and will be tried out by Tracy and Louis P. Mooers, their designer. A MOTOR AGE man hears from one who ought to know that there is small chance of Alden Sampson II presenting his car for trial. In this event the A. C. A. race committee may decide to send over two Peerless machines providing they prove up to standard.

\*\*\*

The Gordon Bennett committee of the German Automobile Club has decided that the German eliminating trials will be run about May 15, over a circuit measuring about 31 miles, located in Schleswig-Holstein and passing through the following: Lubecker Brunnen, Schmalbeck, Bahnübergang bei Lockstedter Lager, Mühlenbarbeck, Lockstedt, Hennstedt, Meesen, Grauel, Hohenwestedt, and return to Lubecker Brunnen. The course will have to be covered six times, as the distance for the race has been set at 186 miles. The committee has informed manufacturers that their cars must develop an average speed of 44 miles per hour during the entire race.

Much satisfaction is expressed at the selection of the course, which is pronounced by many an ideal, and in some respects the finest in Europe. The stretch from Hohenwestedt to Lubecker Brunnen, which is about 14 miles long, is perfect. There is not a hamlet along this part of the circuit and as the road is large and in good condition it is expected cars will be run over it at maximum speed.

Burgomaster von Marx, of Homburg, concerning the accommodations that will be made for the press, said: "The press men will have a large and exclusive room near the start and finish. It has not been decided how many telegraph operators will be on hand, but you may rest assured that there will be a sufficient number to insure prompt service. All these operators know French, English and Italian, so that messages in any of these languages can be transmitted just as quickly as those in German. There will be an underground tunnel, which will greatly facilitate newspaper men in getting from one side to the other."

Von Marx said that he was greatly worried concerning the approach of the time when the famous road will be open to the preliminary trials. Four weeks before the race the drivers in the race will be permitted to go over it for the sole purpose of getting acquainted with the turns and difficult stretches. An effort will be made to prevent fast driving and measures are being planned to secure the arrest of offenders. The hours for training on the road will be between 11 in the forenoon and 3 in the afternoon.

Asked as to what would happen if Germany wins the trophy, the burgomaster replied: "Then the race will again be run near Homburg next year, if no serious accident happens."

According to a Vienna paper, John B. Warden, a well known American motorist, generally residing in Paris, has been selected by the Austrian Daimler company to drive its third Mercedes car, the other two being cared for by Braun and Werner. Warden was made a member of the Austrian Automobile Club recently especially for the purpose of being eligible to drive in the race.

It has practically been decided by the prefect of the Ardennes department, in France, that during the eliminating race, all traffic on the circuit will be stopped for about 12 hours.

\*\*\*

The residents of the Isle of Man are greatly pleased to have the British eliminating trials for the Gordon Bennett cup race held on that island and preparations are being made to appropriately celebrate the occasion.

The course which will be chosen is about 50 miles long and is circular in form. It is not a speedy course, but it will be a severe test of the skill of the drivers and the reliability of the cars. The road is full of twists and turns and a number of severe grades are encountered. There are only a couple of stretches of straight road where great speed may be attempted. The roads are well-kept and in good condition, the surface being nearly all steam-rolled granite macadam, with an average width of 18 feet. The principal towns along the route are Douglas, Laxey, Ramsey, Kirmichael, Ballakinnag, St. John's and Ballanalla.

All cars intended for competition in the eliminating trials must be produced for in-

spection at the automobile club by noon of Saturday, April 16. Each firm entering shall contribute \$250 for the first car entered and \$125 for each additional car toward the cost of the trials. Each entry must be accompanied by a deposit of \$1,250, this deposit to cover any number of cars entered by any one firm.

After the selection trials, three cars and drivers and reserve cars and drivers will be selected by the club, it being understood that the selection trials are held simply for club guidance in making a choice, and the winner of the selection trials will not necessarily be selected to represent the club in the race. The names of the proposed drivers must be submitted to the committee of the club before the inspection of the cars, and the committee shall have the right to refuse any driver at its discretion.

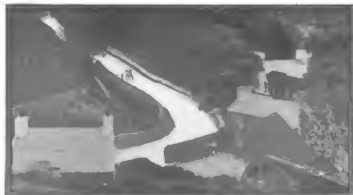
\*\*\*

The decision of the Automobile Club of France not to allow women drivers to take part in the eliminating race, has divided the French automobile world in two factions. One calls it an outrage; the other thinks it the only course which could have been taken. Madam du Gast also protests against the decision, which she claims was directed solely against her, inasmuch as there is not another woman that has ever taken part in a race in France.

"In 1901 I took part in the Paris-Berlin race," said Madam du Gast, "although against the urgent request of the promoters. I did not kill a dog or even a hen. How about many of the male drivers? In 1902 the organizers of the Paris-Vienna race offered a special prize for women, simply to encourage them to take part in automobile races. I was again the only one to take part in the race, and again I did not kill a dog nor a chicken. How about the stronger sex drivers? Last year, in that sad-ending Paris-Madrid race I started twenty-ninth, was seventh at Angoulême and fifth at Montguyon, when I stopped to give assistance to M. Stead, who had been seriously wounded. Is it because I thus humanely showed what a woman's heart is that I am now deprived of participating in the greatest of all races? I protest, from the bottom of my heart, and think it is an injustice."

### INITIATING THE SOUTHERNER

The Winston Bullet II, driven by Barney Oldfield, and old 999, formerly known as the Ford-Cooper racer, and now driven by Ed Hausman, are now being used in exhibition and match races in southern cities, and Saturday and Sunday, March 26 and 27, Oldfield and Hausman are scheduled to race in New Orleans. Each combination is under separate



Sharp Turns on the Picturesque Isle of Man British Trial Race Course

management, the report that both were being managed by Colonel Billy Thompson, having been a canard. Oldfield is under the racing management of his erstwhile racing partner, Tom Cooper, while Hausman is being managed by W. H. Picken, who says he has purchased outright from Tom Cooper the 999 car.

Interest in these matches is enhanced by the fact that the car against which Barney rides now is the one on which he first rode into motor racing prominence, before he was engaged to drive the now famous Bullet, holder of the track records and a likely candidate for mile straightway honors.

After the southern engagement Oldfield proposes to go to Ormond beach, Florida, for a try at this and other straightway marks. Both he and Hausman expect to be on hand in the east when the regular track season opens with the Decoration day meeting at New York. Oldfield's program for the season, as now ar-

## TALK RACE IN THE EAST

### Vanderbilt's Record-Breaking Mercedes Sold To Stanley Ormond To See More Speed Trials

New York, March 21.—William K. Vanderbilt, Jr., has sold his 90-horsepower Mercedes, which made the world's record of 39 seconds for the straightway mile at Ormond last January. The purchaser is B. M. Stanley, Jr., of New York. Mr. Stanley's first purchase in the racing line was the Deauville 1,800 pound car in which Henri Page made the world's 15-mile track record in its class on the Empire City track last autumn. This car was also at the Ormond meet, but owing to its gear being out of kilter it did not do itself justice, being beaten by W. H. Picken's Renault in a tenth race and failing also to make a showing in the open contests.

our own business. If they wish to try for records they would better have the Florida East Coast Automobile Association apply for a sanction for the trials and provide for the timing."

All idea of a race meet at Virginia Beach has not been abandoned. Word comes from Boston that E. B. Stevens and H. L. Bowden have agreed to take their Mercedes racers there should the beach prove fit and a meet be held. A dispatch from them states that Augustus Post, a member of the recent exploring party, who remained behind, has made a trip in his White touring car, 25 miles down the beach. He is quoted as saying that he found it in superb condition.

"All the loose sand had disappeared," said he, "and the beach was as hard and smooth as a wood floor. It will not rival Ormond for record speed, but will be popular for sprints of 5 and 10 miles."

Reports are in circulation of track racing to



Barney Oldfield on Bullet II

Ed Hausman on 999

ranged, concludes with another trip to the Pacific coast in the fall, this western trip including appearances at Omaha, Denver, Salt Lake City, Seattle, Portland, San Francisco and Los Angeles.

### ST. LOUIS TOUR PROGRESS

New York, March 22.—In addition to the national committee to promote the concentrating A. A. A. tours, sectional committees are being organized. Their chairmen have been appointed as follows:

For the west, F. X. Mudd, of Chicago; for the middle west, G. S. Waite, of Cleveland; for New England, Charles J. Glidden, of Boston; for New York state, Herbert W. Smith, of Syracuse, and for the southeast, R. B. Scott, of Baltimore.

G. S. Waite has been added to the national committee. The New England committee is the first to be completely organized, and Mr. Glidden also has named his subcommittees, one of which will select the route from Boston to Albany.

### ADDED TWO CLASSES

In the service test to be held April 4 to 9 by the Automobile Club of America the rules have been amended by adding the two classes for heavy trucks: Seventh class, to carry a dead load of 6,000 to 8,000 pounds; eighth class, to carry a dead load of 8,000 to 10,000 pounds or over. These heavy trucks will be pined in the service of a brewing company,

After all, Mr. Vanderbilt's sale of his record-breaker is not so much of a surprise. It had accomplished its purpose and Mr. Vanderbilt has no fancy for track racing. Besides, the young millionaire, while at Ormond, gave Mr. Charles an order for a new Mercedes flyer of a higher power. It is believed to be Mr. Stanley's idea to enter his new flyer for the Vanderbilt 300-mile cup. This race is more than likely to be contested on Long Island. It is said that the Nassau county people under the new law stand ready to give permission for the race and in fact are bidding for it, offering a 50-mile circuit for its decision. Mr. Stanley will probably also race the great Mercedes at the Empire City course and other track meets.

There will be an exodus to Ormond next month for the eliminating trials. It is assured that Barney Oldfield will go to the beach at this time with the eight-cylinder Bullet for a try at the records. It is said that Henry Ford will also send Hausman there with 459. There are rumors of other cars being taken there also for record trial—the new Baltimore-built Whipple flyer, a 60-horsepower Fiat of international cup pattern, to be imported by Hollander & Tangeman, and an eight-cylinder Ruffum.

"Of course the beach is free to all at any time," said Secretary Butler, of the A. C. A., "and these would-be record breakers can go there when we do, but we will be attending to

be promoted on nearby Jersey tracks. It is said that the old Guttenburg mile course, where America's first track meet was held, will be used for this purpose and that a lease of the Clifton track is being sought.

Joe Tracy, of the Peerless team, and H. B. Feltner, of the Long Island Automobile Club, are to make a tour of inspection this week of the Warsaw county, Long Island, roads, with a view to choosing a course for the Vanderbilt 300-mile cup race.

B. M. Stanley, Jr., is reported to be willing to match his Vanderbilt Mercedes in a race against Oldfield and the eight-cylinder Winton Bullet. In the event of the match not taking place at Ormond it is probable that the rival machines will be brought together at one of the local track meets.

### MELTS FOR THE PACIFIC COAST

San Francisco, Cal., March 16.—At the next meeting of the board of governors of the Automobile Club of California it will be decided whether or not an automobile race meet will be held in this city in May. The Automobile Club of Southern California is planning to hold a meet in May, at which it will endeavor to have Barney Oldfield and several other eastern racing men. The southern automobilists are anxious for the local club to hold an event either before or after their race. The annual automobile race meet at Del Monte will probably take place early in August.

## ASSOCIATION IS ACTIVE

### New York State Organization Doing Good Work in Many Directions —Work on Uniform Bills

Syracuse, N. Y., March 21.—Reports presented at the meeting of the directors of the New York State Automobile Association Saturday showed that in less than 3 months since the body's organization about 1,500 automobilists of the state have enrolled, with prospects of large additions to the membership within the next few months. The association was incorporated December 26, and the fact that so many have already lent their support to the new organization is taken as a most encouraging sign. One of the most important matters acted upon by the directors was the consideration of the Hill-Cocks bill. The measure has within the past few days been taken back from the floor of the senate to the assembly.

A general consultation of automobilists will be held at Albany with a view of securing uniform legislation for all cities and villages of the state, thus doing away with local restrictions. Many tourists and particularly long distance automobilists have in the past found it almost impossible to conform to the varying speed regulations of the different towns through which they pass, and the state body has decided to do everything in its power to bring about the adoption of a thorough going general law.

The only action taken by the directors with reference to the great club run to St. Louis in July was the adoption of a resolution to the effect that the state association co-operate with the national body.

Emerson Brooks, chairman of the good roads committee, suggested a radical change in the present method employed by the state in building highways, providing for a bureau of highways to be in charge of a competent engineer. Mr. Brooks contended that the same specifications should not be used in the construction of clay, sand and dirt roads, as set rules do not apply in all the work.

The election of officers to serve until April 1, 1905, resulted in the choice of Judge Hotchkiss to succeed himself as president and of Frederick H. Elliott to continue in the office of secretary-treasurer. Judge Hotchkiss again heads the executive committee, which consists of the officers and the chairmen of the legislative, membership and good roads committees.

With reference to the automobile races planned to be run again this year in connection with the New York state fair, Chairman Pardington, of the racing board of the A. A. A., stated that no request had as yet been made for the reserving of a date, but that pending such action he would set aside Saturday, September 10, as the desirable day. Mr. Pardington, Emerson Brooks and H. H. Mundy were given a dinner at the Century club Saturday night by Messrs. Smith and Elliott.

Articles of incorporation for the Central New York Garage Co. were forwarded to the secretary of state Saturday. The capital stock to begin with is \$10,000. The officers and directors are: President, Edward I. Rice; vice-president, C. C. Truesdell; secretary and treasurer, C. W. Barker; general manager, George Erwin DeLong. The temporary headquarters of the concern, which is to deal in

automobiles and automobile boats, is at 311 East Fayette street, in the place formerly occupied by the now defunct Central City Automobile Co., but the Central New York Garage Co. has just leased the building in South Warren street formerly occupied by the Syracuse Automobile Co. It also has a large repair and storage shop at 310 Harrison street, giving it a total capacity of 100 machines.

### QUILT IN BUFFALO

Buffalo, N. Y., March 21.—Matters automobiling have been very quiet since the conclusion of the show, partially on account of the winter conditions which so persistently stay with us and partially on account of the majority of the cars exhibited here having been shipped to the Boston show. Very few of the dealers have been able to make any deliveries. The D. H. Lewis Co., however, representative of the Rambler, appears to be in a good position in this respect, and made several deliveries last week. These are the only deliveries that have been made in Buffalo this season with the exception of the George N. Pierce Co., which is delivering cars as fast as it is possible for the factory to turn them out, and those by the Thomas company, which has been equally energetic.

The Adams Express Co. placed a number of electric wagons in Buffalo last spring, and while it was no surprise to the public to see them do the work up to the time the snow came, it has been quite a revelation to see them do the work satisfactorily throughout the winter. There is no question that it has converted thousands of Buffalonians who have been prejudiced against the automobile.

### DAWSON SUFFERS BY FIRE

The automobile factory of the J. H. Dawson Machinery Co., at the corner of Canal and Washington streets, Chicago, was destroyed by fire last Friday night. The three upper stories, which were occupied by the automobile department of the company, were completely gutted and nothing but a charred mass of junk is left of the automobiles which were in course of construction.

The lower floor was filled with machinery and this was damaged by water. There was no insurance on the automobile department and the loss on this is total. The entire loss is estimated to be about \$35,000.

The company had a number of orders for automobiles, and these will, of course, have to be cancelled, as it will not be possible to fill them this spring. The work of rebuilding will begin at once, and some machines may be turned out later in the season.

### MAY REFUSE ADVERTISEMENTS

A newspaper publisher has a right to reject an advertisement, even when the advertiser offering it has a contract with the paper for advertising space, according to a recent decision of an English court. The Autocar, of London, received copy for an advertisement from an automobile company in which the statement was made that the company was "the largest manufacturer of component parts in the world." The publisher alleged that this was not a fact and refused the advertisement. The company brought suit to compel the publication according to contract. The court found for the publisher, sustaining his right to reject the advertisement, but the company was awarded \$250 damages.

## ROUSED FOR GOOD ROADS

### New York-Chicago Highway Association Holds Enthusiastic Meeting at Erie—Government Aid

Erie, Pa., March 19.—There was a large gathering of good roads enthusiasts here Wednesday and Thursday at the meeting of the New York and Chicago Highway Association. Over 300 delegates from various parts of the country were present, and the work accomplished will do much to forward the good roads cause throughout the United States. Erie is a sort of hotbed of good roads ideas, and the citizens take great interest in anything that will help the cause along. The members of the chamber of commerce are especially active along this line, and their greeting to the delegates was most enthusiastic.

Colonel Albert A. Pope presided over the sessions of the convention and on the opening day made a rousing address in behalf of the cause. Senator Latimer, of South Carolina, and other good roads promoters also spoke on the first day.

A banquet was held at the chamber of commerce Wednesday evening, at which the delegates and the hosts became better acquainted as they mingled socially and interchanged views.

The chairman was given the power to appoint sub-committees in each county through which the New York and Chicago highway will pass, these committees to co-operate with the association in its work. The association will assist in obtaining legislation in the various states and secure both state and federal aid in building the roadway.

The final session Thursday afternoon was devoted principally to the address of John Farson, of Chicago, first vice-president of the association, who spoke on the advantages of an interstate system of good roads. A short talk by Sidney S. Gorham, chairman of the good roads committee of the Chicago Automobile Club, preceded the address of Mr. Farson. Mr. Gorham has taken up the good roads work and will push it vigorously in Illinois.

Some of the chief points in Mr. Farson's address follow:

It is now almost exactly a hundred years since the nation saw the first fruition of this movement in the great national road. A century has now elapsed since the beginning of work upon that great improvement, an enterprise which engrossed the attention of our statesmen for years and drained the federal treasury of millions of dollars. Will it be a coincidence, certainly a most fortunate one, that as the beginning of the nineteenth century saw our first national advance in road building, so the beginning of the twentieth shall mark another and even more decisive epoch in the same movement?

The question now uppermost is not "Shall we have good roads?" but "How shall these roads be built? what part shall the national government have in the work?" We may well ask ourselves if the federal government has acted wisely in lending its aid to great railroad systems, in assisting the manufacturing and commercial industries of the nation with a prodigal hand, and at the same time withholding its support from the development of country roads.

Of what avail would be any development, however great, in manufacturing, agricultural and mining lines, without roads for transportation of the products? If there be roads, but if they are poor and inefficient, how vast is the damage to all these industries that are the sustenance, the very life of the state?

What we are striving for now is not a great national road, such a road as the national highway of a century ago; what we need now is a

system of roads permeating every state of our great country.

If the state and the national government are the more prosperous under better road conditions, should not the state and the national government bear their share of the cost of producing these better conditions? There is no more reason why a country road should be paid for by the farmers living near it than that an improved city street should be paid for alone by the owners of abutting property.

Commercial aid is even more than a matter of right and justice, however; it is a matter of sheer necessity.

Illinois is only an example of what is true throughout the land. What is needed in Illinois is needed elsewhere. A division of the cost of construction, by which the national government shall pay one-half the expense of improving roads throughout the nation, the other half to be borne by those directly benefited in such manner and in such amounts as may be determined by the different state legislatures.

The effect of good roads has been not only to help business discommodated from the farmers, but also to brighten the lives of all classes of citizens. It is not too much to say that an era of good roads will bring with it an era of optimism.

### NICE WEEK EVENTS

The annual automobile meeting at Nice, France, which is really the opening of the racing season in Europe, began Saturday and will continue for 9 days. The principal events occur March 28 and 29. On the first of these days, the two Henri de Rothschild cup races will be run over a distance of 1,000 meters on the Promenade des Anglais. The first cup is reserved for cars weighing from 1,430 to 2,200 pounds and carrying two passengers. Last year Leon Serpillet became owner of the first cup given by Rothschild for having won the event 3 years in succession. The new cup is similar in design to the first one. The second trial for the second Rothschild cup will then be run and is reserved for cars weighing more than 1,430 pounds and less than 2,200.

On the second day the Baron de Caters cup will be run over a course of 1 kilometer, standing start, on the Corniche road, where the grade is 10 per cent. There are no conditions concerning weight or horsepower, the only requirement being that the cars must start on their own power. The competitor who has won the event twice becomes the owner of the cup. Serpillet won the race in 1902, in 59:1.5 seconds, and Rigolly won last year in 50:1.5 seconds on the Laffrey hill course.

The mile race will also be run March 29 and is open to five classes of vehicles, those weighing less than 110 pounds; those weighing from 110 to 550 pounds; those from 550 to 880 pounds; those from 880 to 1,430 pounds, and those from 1,430 to 2,200 pounds.

### OPOSES PARIS SHOW

S. F. Edge, of London, England, is of the opinion that the time has come when English manufacturers should cease to exhibit in Paris. He says that in view of the extraordinarily successful automobile exposition at the Crystal Palace, and the fact that it was of a far more international character than the Paris show—or any other show yet organized—this action should be taken. He claims that it is not advantageous to the English manufacturer to show his new models in Paris first, as that merely helps to increase the automobile prestige of France. On the other hand, the French manufacturers must show their models in England because the English market is large enough to demand attention. This course would then make the English show of a distinctly international character.

## WORK NIGHT AND DAY

### Factories at Hartford Unable to Keep Up with the Heavy Demand—Boston Show the Cause

Hartford, March 21.—That the automobile industry is active in Hartford is shown in the announcements of the Electric Vehicle Co. and the Pope Mfg. Co. to run their respective factories 24 hours a day, beginning today. The Electric Vehicle Co. starts with the force divided and with 200 more men put to work, while the Pope company will greatly increase its force during the next few days. Even with this added working force difficulty will be encountered in keeping up with the work.

"Since the first of February we have booked more orders than our gross business for the year 1903, and that was the largest year in the 10 years' history of this company," said President Budlong.

"Our agencies are crying for cars faster than the facilities of the factory will allow," says General Manager Charles E. Walker, of the Pope company.

The hum of industry is heard in the factory district, not only at these two factories, but at other factories which feel the benefits and are at work upon special machinery and parts to supply the trade. The advance orders of the Electric Vehicle Co. are unofficially reported to aggregate \$750,000 at this time and agents are reporting big business daily.

When it was thought that the show trade was about in, the Boston exposition has literally flooded the Hartford factories with orders and it was following this appreciation for Hartford products that night work was decided upon. While many purchasers are crying for deliveries, hosts of others follow who do not stipulate upon delivery and who are anxious to have their orders filed for delivery at the best endeavor of the factory. To the advertisements for help willing hands have come from all over New England, for the trade situation is occupied, with work for even more room.

The Hartford Rubber Works, too, is feeling the effect of the automobile interest throughout the country and is running with its full complement of hands. At the rubber works it is reported that the two new tires recently brought out are very popular so early in the season and that every bit of the great new factory built during the present winter season is occupied with work for even more room.

At the factory of the Whitney Mfg. Co. in the Colt's district, the introduction of a new center pin chain has meant a lot of new business and much more work. The company is now running with a large force. With the anticipation of much work in the automobile paint shops carriage painters from all parts of the country are working their way toward Hartford and many will be taken on next week, when the painting of the assembled jobs begins. This being the busy season with carriage painters, they are commanding bigger wages than ever known heretofore.

### MOTOR CYCLE ENDURANCE RUN

Just a trifle short of 750 miles is the distance of the road from Paris to Bordeaux and back, over which the Autocycle Club of France will hold its endurance run. The first day's run is from Paris to Tours, approximately 160 miles, while the 213 miles separating Tours

from Bordeaux will have to be covered on the second day. The return trip will be over the same road.

Only touring motor cycles will be allowed to compete, and they will be divided into two sections, one for single seated machines and the other for tandems, or for single machines with fore or rear carrier. The motor, carburetor, frame, fork and hubs will be stamped before the start, and may not be changed, under penalty of disqualification. The entire run must be covered within 55 hours, not including the official stops. Machines must be fitted with mufflers, mudguards and brakes. The classification will be made by points, fifty of which will be awarded for the regularity of running on each control.

### RECENT INCORPORATIONS

Washington, D. C.—Schaum Automobile Co., capital \$300,000. To do a general automobile business. Incorporators, Edward C. Bryan, Howard O. Cook, Fred G. Norris.

Camden, N. J.—The Marine Engine & Auto Motor Co., capital \$500,000. To manufacture, buy, sell, repair and rebuild marine automobiles, engines, etc.

Indianapolis, Ind.—Killer Motor Mfg. Co., capital \$25,000. To sell motors, pumps and devices used in pumping or storing fluids. Incorporators, Ed N. Hill, Charles M. Klier, H. O. Winter, W. B. Hill, E. J. Drumm.

Toronto, Can.—The American Motor Car Co., capital stock \$50,000. Incorporators, Milton and Nelson Good, T. Neuhar, Jenn Good, Margaret Good.

Youngstown, O.—The Mahoning Motor Car Co., capital, \$25,000.

### HILL-CLIMBING RACE IN FRANCE

The Provence, France, hill-climbing test, over a course of 500 meters, was held March 6. Owing to rain and muddy roads many of the competitors who were on hand with their machines did not start, only twenty-five cars and six motor cycles contesting. Mamala, on a Griffon motor cycle, won the heat for machines of less than 2½ horsepower, his time being 1:50.4-5, nearly 16 seconds faster than that of the second man. Naso, on a Peugeot, won the heat for more powerful machines, his time being 44 seconds. In the heat for motor cars of less than 5 horsepower, Guerin, on a 4½-horsepower Peugeot, was an easy winner in 1:36.4-5. A 6-horsepower Cottereau car, driven by Aubert, won the heat for cars of from 5 to 8 horsepower in 1:24.1-5. Three de Dion-Bouton cars took the next three places. A 12-horsepower Rochet-Schneider, driven by Roustau, won the heat for cars of from 8 to 15 horsepower, in 1:10.4-5. A de Dion-Bouton was second in 1:11.2-5 and a Richard-Braiser third in 1:12. Haaselin, on a 20-horsepower Rochet-Schneider, won the heat for cars of more than 15 horsepower in 50.1-5.

### RECEIVER FOR MODEL

Quite a surprise to the trade is the announcement of the placing of the business of the Model Gas Engine Co., of Auburn, Ind., in the hands of a receiver, for the company was thought to be strong financially. The receiver is Howard W. Mounts and he is endeavoring to make a definite statement of the condition of affairs as soon as possible. It is expected that the business may be continued, as the company had a large gas engine trade and had entered the automobile industry with good prospects.



# FRENCH FUEL CONSUMPTION TEST



The Greanche Car



The Picardie Hill

**T**HE FOURTH annual consumption and reliability test conducted by L'Auto, of Paris, was held March 3 to 5, inclusive. The principal innovation of this year's trials lay in the fact that, for the first time in France, the speed of the cars, based upon the speed permitted according to the laws, was taken into account in the final averages.

During the first day, tests were made of cars whose chassis were valued at less than \$2,400; those of a value of more than \$2,400 were tested the second day, while the last day was reserved to commercial cars exclusively. There were seven classes. Only regular passenger cars and commercial vehicles were admitted. The following items were taken into consideration: Consumption per ton of total weight; consumption per ton of actual useful weight, or load carried; regularity of running and average speed; speed on the Picardie hill, which was taken with a flying start going one way and standing start the other way. The times on the hill were taken for a distance of 546 yards.

There were forty-three competitors in the different events, of which seventeen took part in the 100-kilometer run from Suresses to Corbeil and return on the first day. A record was established on this occasion inasmuch as all seventeen starters finished the course. The 100 kilometers were to be covered in not more than 4 hours, and an average speed of 25 kilometers an hour was required. Cars running at less speed were penalized. Two Peugeot cars won first and second places in the class for chassis valued at less than \$1,000. Greanche cars won in the class for chassis valued

at from \$1,000 to \$1,600 and from \$1,600 to \$2,400. The Greanche car also made the best time in the hill-climbing test. Sixteen of the seventeen cars used gasoline as fuel; the other using ordinary kerosene.

The second day's test was for cars having chassis valued at more than \$2,400. The road and distance was the same as the first day. A feature was that half of the competitors, although on hand with their cars, backed out at the last minute. The Paris trade papers make much fun out of this and claim that it was due to the fear of possible defeat. The Peugeot and Automotrice cars were the three best place winners of the day.

The last day's competition, reserved to commercial vehicles, is claimed to have been the most successful and most interesting of the tournament. Sixteen cars were entered for this test, which was run over a distance of 60 kilometers. The cars were divided into trucks carrying less than 2,200 pounds; those carrying more than that weight; delivery cars carrying less than 1,100 pounds; those with from 1,100 to 2,640 pounds of load, and those with a heavier load.

The Peugeot truck made the best showing, not only in this particular class, but its consumption average was the best of all the cars that took part in the 3-day test. With a load of 6,600 pounds, the truck weighing 3,696 pounds net, it covered the 37 miles at an average of 7.68 miles per hour on the level road, and of nearly 3½ miles on the Picardie hill, which has an 8 per cent incline. Only 33,808 points of gasoline were used during the run.

An old 1900, two-cylinder horizontal motor Peugeot, belonging to Chénier & Lion, was almost as prominent as the victorious Peugeot truck. This old timer after having been run with ordinary kerosene on the first day and heavy oil on the second day, was run with naphthaline on the third day. It consumed a little over 13 pounds of this naphthaline, which means an expense of 24 cents for the 37 miles, or about .65 cents per mile. Although running on all 3 days it was really in the test only on the second day.

All told, every one seemed highly pleased with this annual competition. L'Auto intends to arrange a heavy commercial vehicle competition on a large scale later in the summer. In making the score upon which awards were

based the grading of the cars was done by general averages which represented points lost. As no possible maximum could be determined in such a test to use as a basis of performance by subtracting from it the number of points lost by each car, the scoring was done inversely, the car with the lowest number of points being awarded first; that with the next highest, second, and so on. Points were determined as follows:

**CONSUMPTION PER TON OF TOTAL WEIGHT**—The number of liters of fuel used divided by the total weight in tons and multiplied by the coefficient ten.

**CONSUMPTION PER TON OF LOAD**—The number of liters of fuel used divided by the weight of load in tons and multiplied by the coefficient ten.

**SPEED**—No penalization for cars running at an average of 25 kilometers an hour or over. Loss of points for cars not making this average determined by multiplying by the coefficient twenty-five the difference between 25 kilometers and the average of speed made.

**HILL TEST**—Average of 20 kilometers required. For average of lesser speed lost points determined same as in case of speed on level but with coefficient of five for flying start and of ten for standing start.

In determining the points for the commercial vehicles the same system was followed, with the exception that in the case of speed a minimum average of 15 instead of 25 kilometers an hour was established, and in the case of the hill climbing a minimum of 12 instead of 30 kilometers and a coefficient of ten were used.



Chénier-Leon-Peugeot



Peugeot Car

The general average of each car was obtained by adding the points lost in each of the four items. Reckoned by this system the summary of results is as presented in the accompanying table.

The table makes some interesting comparisons in the way of relative efficiency of the different classes of cars in different points of service. Thus from it is obtainable the following list of best showings by classes:

In general average, the light delivery car class.

In consumption per total weight of car and load, the heavy truck class.

In consumption per weight of load carried, the heavy truck class.

In the matter of speed the classes of cars at less than 5,000 francs, cars over 8,000 francs, and light delivery cars tied at no penalization for not making required average.

In hill-climbing the light delivery class, being the only class to escape penalization for not making required speed.

Exclusively among the pleasure cars the best performances in all respects were by the cars in the over 12,000-franc class.

### LA ROCHE SOLE IMPORTER

The American Darracq Automobile Co., of New York, F. A. La Roche manager, importer of the Darracq, wishes it stated that S. de Feber, of Philadelphia, Pa., has nothing to do with the importation of Darracq cars, even from Germany, and offers in substantiation of the statement copies of letters from Adam Opel, of Russelsheim, German licensed maker of Darracq cars, to it and to De Feber, in the former of which Opel states emphatically that he has no business relations with de Feber and that he does not sell German-made Darracqs in America; in the latter that he does not care to enter into any business relations with de Feber.

### ACCOUNTING ORDERED

New York, March 21.—The Supreme Court of this state has just issued an order in the suit of the Electric Vehicle Co. against the Weston-Mott Co. on the Elliott patent for steering equipment for an accounting, commanding the defendants to make a sworn statement of their receipts from this source. In default of which the Electric Vehicle Co. is given the right to examine the books of the defendant corporation.

### A. A. E. THE LATEST

The Association of Automobile Engineers of America was organized in New York city March 17. The officers are: President, A. L. Riker, of Bridgeport; first vice-president, Henry Ford; second vice-president, John Williams, of Syracuse, N. Y.; secretary and treasurer, A. E. Birdall, of New York. Only men engaged in "automobile engineering" are eligible to membership in the organization, which has as its object the interchange of ideas in automobile construction and the best development of engineering practice.

### DANES ARE FROM MISSOURI

Before a final contract between the Danish government and the private company which has been granted the permission to establish an automobile postal service through Denmark becomes actual, the company must make a 3 months' trial. The cars must have motors of from 10 to 12 horsepower, be run with gasoline, average 12 miles per hour and must have three speeds.

## SOUTH IS VERY ACTIVE

### Nashville and Memphis Getting Thoroughly Interested in the Automobile - Motor Cycle Takes

Nashville, Tenn., March 19.—Spring is coming fast, and with it an increased interest in automobilizing throughout Nashville and middle Tennessee. Owners of machines are able to take long spins every day, but prospective buyers seem to be holding off until the weather becomes a little more settled. Two of the dealers in the city report sales, but business is not brisk as yet.

An increased interest in motor cycling seems

turnpikes leading into the surrounding country. The increase of interest in the sport has been as marked here as in all other points in the south. A year ago there were ten machines in town and now there are more than forty. Next year at this time dealers predict that there will be at least 150.

There are three regular dealers of automobiles—the Tri-State Automobile Co., which sells Cadillacs; Memphis Auto Co., which handles the Olds, and the Brown & Polk Co., which sells Ramblers. There are also a number of "curb-stone brokers," but they do little business.

Memphis goes in for motor cycling more than many southern cities, and H. A. White, who has graduated from a bicycle to a motor cycle dealer, handles most of the business. He sells only the Indian, but has done big business and prophesies an increase of trade this year. In fact, all the dealers in the city are looking forward to a big year and are already having many inquiries and are making a few sales.

At the present time Memphis has no automobile club, but one is under consideration. In a short time one will be practically a necessity.

Races are also under consideration and will undoubtedly be pulled off this summer. Memphis is peculiarly fortunate in having two fine tracks, one for running horses and the other for trotters and pacers. The latter is one of the fastest in the world, as the work of Dan Patch—mile in 1:56½—Lou Dillon and the other turf wonders proved conclusively last fall.

Memphis will undoubtedly send a delegation of automobilists to the world's fair for the encampment. They will probably go to Nashville and be joined there by the delegation from that city.

### INCREASE ITALIAN DUTY

The Italian parliamentary committee recently decided to urge the government to increase the duty on automobiles, parts and accessories. At present motor cycles are subject to a duty of about \$7.50; parts and accessories are subject to \$3 per 100 pounds; automobiles and chassis are subject to a duty of about \$19.50 per car or chassis, the power of the motor and the weight of the car not being taken into consideration. The committee has suggested that all vehicles be divided into three classes—ordinary road cars, automobiles and cycles. The automobiles will be subdivided according to weight, for the purpose of being able to impose a heavier duty. Cars weighing less than 1,100 pounds will be subject to a duty of \$36; if they weigh between 1,100 and 2,200 pounds, the duty will be \$72 and \$108 if they weigh more. Motor cycles will also be dutiable according to weight.

### LOW PRICE CARS SELL BEST

At the Crystal Palace Automobile Exhibition, seven motor cars exhibited cost less than \$480; thirty-eight cost between \$480 and \$720; forty-three cost between \$720 and \$960; sixty-eight cost between \$960 and \$1,680; eighty-five cost between \$1,680 and \$2,400; ninety-nine cost between \$2,400 and \$3,360; sixty-seven cost between \$3,360 and \$4,800, and fifteen cost more than \$4,800. The bulk of the business done at the show was for cars ranging in price from \$1,680 and \$3,360; the sale of very high priced machines was remarkably small compared with the sales of such machines at Paris and even at previous British shows.

SUMMARY OF FRENCH CONSUMPTION TEST									
	Name of Car.	Consumption per ton total weight	Consumption per ton of load	Speed	Hill, feet	Hill, start	Hill, standing	Total points	Final
CARS SELLING AT LESS THAN 5,000 FRANCS									
Pugeot	64 211	0	81 155 513						
Pugeot	60 285	0	77 33 522						
Pouffillon	91 200	0	87 136 523						
Boyer	64 423	0	58 182 227						
Bolide	132 464	0	90 192 874						
P. Roy	154 633	0	49 115 951						
Average for class	95 373	0	70 160 498						
CARS SELLING AT 5,000 TO 8,000 FRANCS									
Crenche	67 238	0	13 38 256						
Chenard & Walcker	70 323	5	30 136 513						
Pugeot	105 382	0	77 33 522						
Vivinus	115 420	0	0 81 635						
Vinot-Dugand	92 531	0	0 34 677						
Aries	114 454	0	72 155 792						
Boyer	97 556	0	63 126 842						
Average for class	93 416	1	27 97 644						
CARS SELLING AT 8,000 TO 12,000 FRANCS									
Crenche	75 349	0	0 83 507						
Aries	72 285	0	41 129 514						
Vinot-Dugand	131 507	0	21 47 760						
Average for class	93 469	0	21 83 606						
CARS SELLING AT OVER 12,000 FRANCS									
Pugeot	88 360	0	25 62 475						
Automotive	80 384	0	80 523						
Gaudin	108 540	5	92 105 840						
Chrysler-Lion	106 578 100	15	175 1037						
Average for class	88 342	0	15 71 514						
TRUCKS CARRY MORE THAN A TON									
Pugeot	54 53 37	81	205						
Baron	54 126 75	108	363						
Gillet Forest	54 115 115	164	438						
Average for class	47 98 76	117	338						
TRUCKS CARRYING LESS THAN A TON									
Gillet Forest	60 135 67	108	279						
DELIVERY CARR CARRYING UNDER 500 KILOS									
Aries	57 228	0	0 285						
DELIVERY CARR CARRYING OVER 500 KILOS									
Gillet Forest	65 166 62	78	371						

\*Taken without account of last two, which were old cars not properly in class.

certain this year. A year ago not a single dealer in middle Tennessee handled motor cycles. Last fall one dealer entered the field and this spring another, Jack Suth, connected with the John W. Chester Co., has taken an agency and will push the sale of the two-wheeled machines. Mr. Suth will handle the March and will have his sample machines on exhibition soon.

Several prominent automobilists continue to work on the proposed race meeting to be run at Cumberland near the close of the spring running races.

Pictourosque Memphis is unquestionably the most important city in Tennessee to the automobile trade, next to Nashville, and one of the most important in the entire south. It is the largest city in the state, has good roads within the city limits and more than 150 miles of good

# GOSSIP OF THE METROPOLITAN GARAGES



The first day of real spring sunshine last Saturday was marked by much activity, many demonstrations and encouraging sales at the garages.

\*\*\*

The American Darracq Automobile Co. received four Darracqs of new type last week—two "tulip" tonneaus with swinging front seats and folding step entrance and two double phaetons with limousine tops and doors on each side.

\*\*\*

The New York Garage Co., where the Georges Richard-Brasier cars have been heretofore sold, is to be dissolved. E. B. Gallagher announces himself as their national sales agent and that he will continue to sell them at the former garage, 140 West Thirty-eighth street.

\*\*\*

M. A. Cornell & Co. have taken the New York agency for the Cameron, a single-cylinder, air-cooled car, made by the United Motor Corporation, of Pawtucket, R. I., and established headquarters at Broadway and Sixty-third street. Mr. Cornell is also interested in the Tennant Tire Co.

\*\*\*

"The demand for cabs far exceeds the supply," says H. C. Cryder. "At present a rental of \$250 per month is charged. We can put out cabs to rent for \$150 and make money at it. This double friction drive transmission is simplicity itself and comes near to being fool proof. One lever in front operates the machines."

\*\*\*

Charles S. Worthington is building a neat garage near Seventh avenue, running through from Forty-ninth to Fiftieth street. It will have storage accommodations for 300 cars, each of which will have a steel fitted compartment to itself. There will be many conveniences in the way of reception and locker rooms. It is intended for use by private owners who do not care to maintain independent garages.

\*\*\*

Slaton, Henderson & Gillies have taken the New York agency for the Buckmobile Co. and will conduct their business under the title of the Buckmobile Co. They have just had completed for them a fine two-story brick garage at 1900 Broadway. Mr. Gillies says the parent company will bring out this season a 16-horsepower car with vertical motor, planetary transmission and wheel steer. The local firm is going into motor-boat building also. The Rockaway Boat Co. will build the hulls, which will be fitted with Buckmobile engines. They will bring out a 25-foot 15-horsepower pleasure

boat with a guaranteed speed of 13 to 14 miles an hour to sell for \$900. They will also build a 31-foot 30-horsepower racing boat.

\*\*\*

"We sold forty-two Peerless cars at the Boston show," said W. H. Kirkpatrick, who was in town on Monday en route home from Cleveland.

\*\*\*

R. M. Owen, manager of the American Automobile Storage Co. and the Oldsmobile Co., took a flying trip this week to Syracuse and Detroit to secure larger and more prompt shipments of Franklins and Oldsmobiles to meet the big demand.

\*\*\*

E. B. Winans, of the American Darracq Automobile Co., has invented and copyrighted a clever table, whereby one may readily determine the speed in miles per hour from the time per mile by forming right angle columns to their intersection. The table is being distributed free by the company.

\*\*\*

To really learn what is good, bad and indifferent in the automobile game an American must seek the advice of some young European of about 20, who comes to this country with fearful and wonderful tales of his experience in making, selling and driving Mercedes, Panhard, Darracq, Renault, Benz and a dozen other cars.

\*\*\*

The Consolidated Motor Co. now has one of its gasoline trucks in actual use by the American Express Co. It is proving very successful and running far ahead of the company's schedule for horse-drawn vehicles. The trucks are being manufactured at the company's factory at Gloversville, N. Y. All are being built with the double friction drive transmission system, whose patents the company bought from the Maurer Co., of Wurzburg, Germany. By next autumn the company will be putting out



SECTION A-B The Walker Magnetic Chuck

a 14-16 horsepower, two-cylinder tonneau, to sell for \$2,000. It is also proposed to manufacture 6-horsepower cabs, hung on C springs and luxuriously upholstered, for public and private use. For the former purpose a cab line will be established.

\*\*\*

Smith & Mabley will begin to deliver Simplex automobiles and boats in May. The former will be of 22-horsepower model and the latter will run from 30 to 75-horsepower.

\*\*\*

Mr. Cryder says that a 75-horsepower racing car will be built for "Wally" Owen to drive in the track circuit this season. The company will also put out a 25-horsepower, 30-foot boat. The engine will weigh 370 pounds and the mahogany hull to be built by Inglis, of the St. Lawrence, but 300 pounds.

\*\*\*

While at the Boston show E. T. Birdsell, of the Standard Automobile Co., sold a double phaeton Dreuville to Winston Churchill, the author. The car is of a new type. It is of 18-24 horsepower, 9-foot wheel base and has a victoria hood, wide side entrances and a glass front wind shield. This is the second Dreuville Mr. Churchill has bought.

\*\*\*

The arrival of the first of the 1904 curved front Olds runabouts at the Oldsmobile Co.'s garage brought with it a genuine surprise to the trade. It proved radically different from the runabout exhibited at the Madison Square garden show, which Manager Howell now says was really but a late 1903 model fixed up with a change or two for the occasion. The real 1904 is a radically new machine. Its power has been raised from 4 to 6, the cylinders now being 5 by 6 inches, instead of 4½ by 6, as formerly. The cylinder and head are now cast in one piece, doing away with gaskets. The cylinders are cast separately, with the cylinder fitted to the crank case by four bolts. The body and seat are much wider and all the working parts are heavier. The car now has hub brakes.

\*\*\*

There was a considerable exodus of the local trade to the Boston show last week. Among those to visit the Hub's exposition and make exhibits directly and through local agents were: C. H. Tangeman, of Hollander & Tangeman, importers of the Fiat; C. R. Mabley and C. H. Hamilton, of Smith & Mabley, manufacturers of the Simplex cars and boats and importers of the Panhard and Renault; Mr. Kimball and Mr. Moody, of the Central Automobile Co., importer of the Napier, Mors and V.

& D.: F. A. LaRoche and A. L. Picard, of the American Darracq Automobile Co.; E. T. Birdsell, of the Standard Automobile Co., whose Boston agent showed the Decauville, and E. J. Willis, sundry jobber and agent for the Orient buckboards in this city. All report satisfactory business done.

### MAGNETIC CHUCKS

The manufacture of magnetic chucks is made a specialty by O. S. Walker & Co., of Worcester, Mass., which is now introducing these chucks to the automobile trade as especially desirable in grinding piston rings or in holding other rings, disks and washers which cannot be held conveniently in other kinds of chucks for finishing their flat faces. The chucks will hold any piece with parallel flat sides without the use of bolts, straps or gripping jaws, and are made to fit Brown & Sharpe universal grinders or other makes of machines of that nature. In the illustrations herewith the chucks are shown attached to a lathe for convenience in photographing.

One illustration shows several pieces held on the same chuck to save time in grinding, the periphery of the grinder being fed gradually across the face of the work. The detail drawing shows the arrangement of the magnetic gaps and of the alternating positive and negative poles so that a ring placed upon the holding face of the chuck will be held at six different points, inasmuch as it spans six different magnetic gaps. There are two brushes placed side by side and fastened on the head stock of the grinder, being primarily mounted on an insulated collar. The brushes contact with insulated contact rings which have connection with the electric coil in the interior of the chuck. Over the small centering ring brass rings of diameters to suit the diameter of the pieces to be ground may be placed. The chucks are regularly made in various sizes from 6 to 27 inches in diameter. Special chucks of any desired diameter are also made to order.

### FABRIC NOVELTIES

Automobile fabric supplies are made the subject of a folder issued by the Gilbert Mfg. Co., of New Haven, Conn. One of the appliances described is a tire case made of black enameled duck, which is to be used to protect against deterioration by exposure extra tires carried on the automobile. It is accompanied by a neat water-proof bag for inner tubes.



Car Built in St. Louis in 1896

MOTOR AGE

Another article is fabric enameled leggings which are said to equal leather leggings in appearance and to be much lighter and more comfortable. The Gilbert grease bag is designed to be filled with Albany grease and strapped over steering connections, knuckle joints or other exposed connections. The company also makes covers to protect cars at rest.

### A ST. LOUIS RELIC

John C. Higdon, a mechanical engineer at St. Louis, Mo., was one of the early conspirators against the horse and his initial effort in automobile building is shown in the accompanying illustration. The car was built in 1896. It was designed to travel from city to city in the states of Missouri, Kansas and Nebraska, as an advertising wagon, and it was run continuously during the summer and fall of 1896, and at that early date proved a veritable curiosity among the natives of the rural districts. It is said to be still running in St. Louis.

Four elliptic springs support the body, but the engine and its frame are entirely independent of the body, being supported by small coiled springs directly from the axles. Common wood wheels, such as used on common horse-drawn wagons during the past 40 years, with ordinary steel tires, were fitted.

The engine was a single-cylinder, 5 by 7-inch stationary motor, commonly used to drive machinery and was removed from its foundation and fitted to the automobile. The engine alone weighed 2,500 pounds. A friction clutch was used to connect and disconnect the engine. The front axle has the usual knuckles whereby the front wheels are swiveled. The speed is controlled by throttling the mixture, and speed varies from 3 to 15 miles per hour. Mr. Higdon is the authority on the maximum speed of this car.

### BAD AS CHICAGO

The special committee named by the Italian minister of public works has presented a scheme concerning speed regulations for Italy, recommending that the maximum speed in cities and towns be 7½ miles, no speed limit in the country, all cars to carry a white light in the rear, cars to be numbered, permits for driving to be delivered after examination.

### HONORED FOR INFLUENCE

The Automobile Club of France has awarded club medals to Senators Contant and Gerard and Deputy Hubert, all of Ardennes county, for their efforts in behalf of the French eliminating race. It was owing to their influence upon the other members of parliament that the latter voted permission to hold the race.

### BETTER THAN RAILROADS

Experiments were made in Brussels by transporting in automobiles several detachments of troops belonging to an artillery regiment, with the full equipment they would carry in case of war. The results are reported to have been more satisfactory than using railroads for the same work.

### IDEA IS GOOD

A member of the Danish legislature has suggested that all the railroad trunk lines be equipped with automobile feeder service. He says they will be less expensive than heavy trains and could reach many points which the railway does not touch.

### AUSTRIANS CARRY NUMBERS

At a recent meeting between the Austrian minister of the interior and a delegation of members of the Austrian Automobile Club it was decided that Austrian automobiles must carry a number in front and one in the rear.



The Walker Magnetic Chuck

MOTOR AGE



The King of England now owns seven motor cars.

The Nederlandsche Automobiel Club has 204 members.

The Moline Automobile Co., of Moline, Ill., expects to manufacture about 100 automobiles this season.

The Illinois Motor Car Co., of which John Zimmerman is manager, has the agency for the Royal Tourist in Chicago.

S. G. Norton & Co., of Milwaukee, Wis., will build an automobile repository on Broadway near Mason street. The building will cost \$10,000.

The office of J. M. Quinby & Co. has been changed from 513 Seventh avenue, New York, to 1531 Broadway, corner of Forty-fifth street. The change was necessary because of increasing business and the need for larger quarters.

Smith & Mabley, of New York, are sending out a little story about the foreign-looking aspect of the S. & M. automobiles, telling how it puzzles even expert mechanics. The story is printed on brown paper like that used by country grocers a few years ago when they tied up sugar for the farmer's wife.

An Indian motor cycle club is being formed in Springfield, Mass., and there is a prospective membership of about thirty persons. The members plan to start on their motor cycles Saturday afternoons during the spring and summer and take a ride of a century or two, returning Sunday evening. Charles Spencer is at the head of the movement to form the club.

"Golden Gate to Hell Gate" is the title of an interesting little pamphlet, written by L. L. Whitman, detailing the adventures he encountered when he crossed the continent in an Oldsmobile, accompanied by E. I. Hammond. The story is told in a humorous vein, and the Oldsmobile is mentioned only incidentally—which makes it the best sort of an advertisement for the car. The book is copyrighted, published

and given away by Brownell & Humphrey, of Detroit, Mich.

During 1903 the Dutch authorities issued nearly 1,200 driving permits. Over half of them were given to Belgian tourists.

A weak solution of boric acid is recommended as a remedy for those who suffer with their eyes after driving in a keen wind.

Governor Myron T. Herrick, of Ohio, recently purchased a 24-horsepower Peerless car through the Chisholm-Phillips Automobile Co., of Cleveland, O.

Henry Wilke, of Richmond, Ind., will have an automobile repair shop this season in the building formerly occupied by the Schneider carriage shop, on South Sixth street.

C. A. Cory & Co., of 5311 Cottage Grove avenue, Chicago, have added a stock of automobile supplies and will conduct a regular retail business in this line. The Cory company handles the Thomas car.

Fifteen members of the Nederlandsche Automobiel Club covered 7,359 miles under government orders during the railway strike, which fifty-nine members held their seventy-nine motor cars at the disposal of the government during the entire strike.

The H. J. Koehler Sporting Goods Co., of Newark, N. J., has established a garage in Montclair, which will prove of great convenience to owners of cars in that town, as heretofore they have been compelled to store their machines either in Newark or Orange.

An automobile club has been organized at Newton, Mass., with the following officers: President, William M. Feiris; vice-president, Charles J. Brown; secretary, Ralph C. Emery; treasurer, Lewis R. Spence; directors, Dr. E. R. Utley, E. D. Van Tassel, J. A. Potter, C. G. Skinkell, A. M. Evers, Dunn Estes, Jr., and N. E. Stanley.

The German Motor Cycle Association has arranged a competition for lanterns and lamps to be used exclusively on motor cycles.

The Cadillac and the Autocar will be handled this season in Mankato, Minn., by C. H. Sunlough and George McLean, who have formed a partnership.

The Powell Automobile Co., of Omaha, Neb., has filed articles of incorporation. The capital stock is \$15,000, and the incorporators are C. G. Powell, Ezra Millard and T. F. Swift.

The New York Motor Cycle Club will hold its annual hill-climbing contest Decoration day. The contest was held at Riverdale hill last year, but this year a steeper grade will be sought.

J. E. Heald, of Napa, Cal., has the agency for the Rambler for Napa and Solano counties. During the week the National Automobile Co., owing to a disagreement of two of its principal stockholders, asked for and obtained an assignee in the person of A. C. Kains, of the Canadian Bank of Commerce. He has taken over the business and will carry it along on the same lines as before.

The Automobile Club of Bridgeport, Conn., will hold its annual meeting on Monday, April 4, at which time it will elect the following officers: President, Frank W. Bolande; vice-president, Frank I. Hitchcock; secretary, Dr. Dow R. Beebe; treasurer, Frank T. Staples; board of governors, M. V. Dond for 1 year; Thomas H. McDonald, Gregory S. Bryan and A. L. Riker for 2 years. Mr. Bolande, who is managing editor of the Bridgeport Evening Post, was one of the incorporators of the club and was for 3 years its secretary. The club now has over seventy members and it is in a prosperous condition.

At the recent automobile show in Brussels, Belgium, 17 per cent of the motor cars had single cylinder motors; 27 per cent had double cylinders and 54 per cent had four cylinders. The chassis offered the following percentage. Forty-one per cent pressed steel, 40 per cent armored wood, 17 per cent tubular, and 3 per cent channel iron. The price of the chassis, according to the horsepower of the motor, was as follows: Chassis with 6 to 9 horsepower, \$700 to \$1,200; with 9 horsepower motor, \$650 to \$1,600; with 10 to 12 horsepower, \$1,200 to \$2,540; with 11 to 16 horsepower, \$1,000 to \$3,400; with 18 to 24 horsepower, \$1,600 to \$3,800; with 30 to 50 horsepower, \$2,400 to \$5,000.

According to the new automobile law of Newmark, motor cars must not greatly differ either in shape or size from horse-drawn vehicles. Omnibuses and large commercial cars must have rims 4 inches wide if they are not equipped with pneumatic tires. The height of the vehicle must not be over 10½ feet and the width 6 feet 3 inches. The limit of weight is placed at 6 tons for country roads and 4 tons for city highways. All motor cars must have powerful brakes, which must enable the car to stop within 8 yards. In the larger towns the speed limit is 10 miles per hour; 20 miles in the country. The police department tests the car and also has the driver undergo an examination, oral and practical, before a license is granted.



Dayton, O., has a new automobile firm—Stark & Weckesser.

☛

The chief of the New York fire department has sent in a requisition for two new automobiles to be used in the department.

☛

At the last meeting of the city council of Allegheny, Pa., an ordinance forbidding the running of automobiles in Riverview park was passed.

☛

The Lornin Automobile Co., of Lorain, O., has been organized by Frank S. Rathwell and Henry Frederick. The company will handle the Winton, Oldsmobile and Franklin.

☛

The Toledo Ophthalmoscope Co., of Toledo, O., will manufacture a goggles invented by Dr. Zarbaugh, of that city, which it is claimed will protect the eyes and prevent squinting.

☛

A line of electrically driven breast drills and grinders, well adapted to much of the fine machine work on automobile parts, is shown in a small catalogue issued by James Clark, Jr. & Co., of Louisville, Ky.

☛

The citizens of Evanston, Ill., are considering the advisability of organizing an automobile club. It will be composed of residents of that suburb of Chicago and will keep closely in touch with the Chicago Automobile Club, most of the Evanstonians being members of the latter club.

☛

The catalogue of the Auto Supply Co., Broadway and Fiftieth street, New York, lists a full quota of standard line parts and appurtenances and also numerous novelties in the way of convenient sundries for the automobilist. It is a much more extensive book than any of the previous catalogues of the company.

☛

The educational department of the Y. M. C. A. of Providence, R. I., which, as formerly announced in *MOTOR AGE*, has undertaken, with the assistance of the Boston Y. M. C. A., to conduct an automobile school in connection with its evening institute, has issued its prospectus. The course opened March 21 and is substantially the same as that which has been carried out in Boston, a few changes such as dictated by the former experience being made.

☛

The Locomobile Co. of America, of Bridgeport, Conn., believing that more than ever before the prospective purchaser of an automobile takes an intelligent interest in a car's construction, announces that it is always glad to receive visitors at its factory and to show them all the features of its gasoline cars in the various stages of development. The company only asks that visitors advise it in advance of their coming that proper arrangements may be made to receive them.

☛

C. G. Bargoyne, of Daytona, Fla., president of the Florida East Coast Automobile Association, in one of the local papers replies to statements made in an eastern paper relative to the work done by this association in connection with the recent speed tournament on the Ormond-Daytona beach. The association having been accused of having done little toward the meet's success its president calls attention to the fact that it did all it possibly could, and a whole lot at that, in consideration

of the fact that men who work for their living contributed both money and time in preparation for and in the conduct of the affair.

☛

Robert S. Crawford, of Philadelphia, Pa., with the assistance of Hagerstown, Md., capitalists, will build an automobile factory at Hagerstown, Md.

☛

The power plant of the Northern Automobile Co., of Detroit, Mich., recently became disabled and the shop machinery was temporarily run by Northern carriage motors.

☛

A fund of \$4,000 has been subscribed by the citizens of Cherryville, Pa., toward establishing the Frantz Mfg. Co., which will manufacture kerosene engines, burners and boilers.

☛

The Iowa legislature has passed the Christianson bill, which requires automobiles to be registered, and makes the speed limit 10 miles an hour in the cities, 15 miles an hour in the outlying districts and 20 miles an hour in the open country.

☛

The Oldsmobile Co. of New England, of Boston, Mass., the New England branch of the Olds Motor Works, of Detroit, Mich., under the management of Benjamin Smith, has issued a little booklet containing Whitman's story of the trans-continental trip in an Oldsmobile and T. P. Driver's story of his ride up Mount Washington. It is artistically gotten up. In fact, typographically, it gives the Whitman story booklet issued by the home office a close shave in degree of excellence.

☛

The Winton Motor Carriage Co. announced last fall that prompt deliveries of 1904 Winton cars would be guaranteed. In order to carry out this promise, the company completed its plans so early that by September, 1903, its big plant was working full force in every department. By continuing work steadily all winter the company has already completed its full quota of several of the car's parts, and in consequence of this fact the force in the wood working department and the machine shops has been reduced. Meanwhile, it is said, cars are being turned out at the rate of one per hour and will continue to be so produced until the season's supply is manufactured. In anticipating the demand for cars, the company

has endeavored to avoid the congestion that generally results during the rush season to the discomfort of maker, dealer and purchaser alike.

☛

It is reported that E. R. Hollander, of Hollander & Tangeman, of New York, importers of the Fiat car, has offered to give \$5,000 to the winner of the Gordon Bennett international cup race if he drives a Fiat car.

☛

Ralph Rogers, of Ottumwa, Iowa, will open an automobile salesroom in that city in April. He will carry the Rambler and Mitchell cars. Mr. Rogers has for nearly 2 years past been in the employ of Thomas B. Jeffery & Co., of Kenosha, Wis., an automobile inspector.

☛

During 1902 there were imported into Great Britain 3,747 automobiles and motor cycles, valued at \$4,762,699. In 1903, the number of imported cars and motor cycles was 6,133, with a total value of \$8,227,099. On the other hand 415 British cars and motor cycles were sent to foreign countries in 1902, and their value represented \$745,632. During 1903 the exports reached \$1,390,177 for 957 cars and motor cycles.

☛

The Transportation Club of New York chose the automobilists to honor at this year's annual banquet, which was scheduled to take place at the New Manhattan hotel, Tuesday. Many pioneers in motor vehicle invention and manufacture were invited. Among the invited speakers were Winthrop E. Scarritt, president of the A. C. A.; John B. Dill, a long-distance touring enthusiast; John A. Hill, chairman of the A. C. A. central committee, and Highway Commissioner McDonald, of Connecticut.

☛

A call has been issued by some of the automobile owners of Binghamton, N. Y., for the organization of a club, and about sixty-five motorists have signified their intention of joining. A general meeting for the purpose of perfecting plans for the organization of the club will be held in a few days, and it is expected that the ideas of the promoters of the club will be carried out at that time. The club will start in on a small scale, but later arrangements will be made for club rooms, and meetings will be held regularly.



Mrs. George Bowman, of Los Angeles, Cal., Driving Her Arrow



# AUTOMOBILE

## RACES AT KILL REGATTA

The German emperor having fallen a victim to motor boating, the great regatta at Kiel, which opens June 22, will be quite as much a motor boat affair as a sailing event. There is to be a series of races for motor boats, including all modern types of steam, benzine, petroleum and alcohol motor boats and yachts. The boats will be divided for the competition, according to tonnage and power, into three classes or categories, with prizes in each class and a valuable trophy to be given by the emperor to the winner of the principal event. The conditions of admission and rules and stipulations governing the several contests are now in preparation by the German Automobile Club, and will be given in a subsequent report as soon as they are announced.

The enterprise is inspired and directed by the emperor, who has ordered for his own entry in the coming contests a motor boat which is now under construction at Bristol, R. I. In view of the recognized pre-eminence of American builders of motor boats of all classes, it is especially desired in this country that they shall take an active part in the competitions at Kiel, and make a display there which shall worthily represent their high standing in this interesting and important class of saltwater craft.

In June, 1902, there was held at Wannsee-on-the-Havel, near Berlin, a special international exhibition of motor boats with special reference to the types and sizes best adapted to use upon inland lakes and rivers. A special appeal was made to American builders, the managing committee even going so far to guarantee the sale of any representative American-made boat or motor which might be exhibited there; but that was during the period of full-tide prosperity in the United States. All the leading American builders were stocked with orders covering their whole product for the year, and while personally interested in the Wannsee competition, and appreciating the inducements offered, they were too busy with actual business to send over and exhibit in Germany boats which had been already sold in the United States. Naturally enough no builder cared to retain for exhibition abroad a boat or motor which had been ordered by a customer who was impatiently awaiting delivery, and so it happened that the United States was wholly unrepresented at Wannsee, and the competition, which was mainly between boats of German, French and Belgian construction, failed to reach the standard of a representative international display.

This year the competition will be under different auspices and on a much more imposing scale. Its purpose will be to bring together the work of the foremost motor boat builders



The French Marthe

in all countries under circumstances which will test and demonstrate their relative speed, economy and other merits under conditions which will give to a victorious record a world-wide significance.

## MOTOR BOATS IN THE SOUTH

Nashville, Tenn., March 19—At the present time not a single automobile boat, as far as can be ascertained, is owned in middle Tennessee. John W. Chester will soon purchase one, however, and it is expected that they will become popular here. The Cumberland river, on which Nashville is situated, does not furnish an ideal stretch of water at the present time. During the summer the latter is low and navigation, in fast moving boats, becomes dangerous. The United States engineers, however, are rushing work on locks I and A—one above Nashville and one below—and they will be finished during the fall. When these go into operation there will be a long stretch of deep water extending in both directions from the city, which will furnish an excellent place for running fast boats. At the present time there are a number of steam and small gasoline launches on the river and they will certainly be succeeded by larger motor boats after the new dams begin to back up the water and furnish a suitable place for fast running.

## MOTOR BOAT NOTES

A Detroit builder has hopes of driving a 57-foot boat 45 miles an hour.

Sixteen horsepower in a 16-foot boat, a Chicago man's idea, is almost the limit.

A race is on between some of the "400" to see who shall have the first fast motor boat in the water.

The Truscott Boat Mfg. Co., of St. Joseph, Mich., will have a full-rigged gasoline yacht, 77 feet long, with bridge, in the center of its immense exhibit at the St. Louis World's fair.

A Boston paper explains the difference between "the marine engine and that of the auto-marine boats" as follows: "The distinction is the procuring of high power with small weight of machinery, and is practically the difference between the make and break, or primary spark coil, and the jump spark or induction coil."

## MOTORING IN EGYPT

Of the forty automobiles which have so far been imported into Egypt about a third are the property of the Khedive. He received the first car sent to Egypt, 3 years ago, which was a 3½-horsepower de Dion-Bouton. The last car purchased by the ruler of the Egyptians was a large Mercedes. Most of the automobiles are to be found in Cairo, where the roads are a trifle better than elsewhere. The most popular road is that to the Pyramids, which is a straight course about 8 miles long.

# BOATING

## GASOLINE LIFE BOATS

Washington, D. C., March 19—The fact has just been brought to light that for the past 6 weeks the revenue cutter service of the treasury department has been conducting experiments for the purpose of equipping the life saving boats of the government with engines of the automobile type. These experiments, which are under the immediate direction of Captain Collins, engineer-in-chief of the revenue cutter service, have progressed so far that the very near future will see a type of engine evolved that will be perfectly adapted to the purpose.

The problem to be solved is by no means an easy one for the type of engine suitable for use in the life boat now employed in the life saving service must, with the screw and other machinery used, be kept at a low weight; otherwise the capacity of the boat will be interfered with. At the same time an engine of unusual strength is required. The experiments thus far indicate that a motor of about 20 horsepower will be required.

It is the aim of the revenue cutter engineers who are working on the problem to devise an engine that will be a compromise between the marine engine and the automobile type of engine, to utilize features of both and get an engine of minimum weight combined with the highest possible efficiency. The necessity of starting a life boat quickly makes the use of gasoline almost imperative. It is the belief of the engineers that an engine can be devised which, with the shafting, screw, and other necessary apparatus, will weigh about 1,200 pounds. It will be located in the stern air chamber of the life boat, as under this arrangement no room otherwise needed will be occupied. One indispensable feature of the engine is that it must come to a halt when the boat is overturned. Otherwise the revolving of the screw in a heavy sea might endanger the lives of the life savers.

The completion of the experiments now under way will be watched with interest by all who are interested in the improvement of engines suitable for boats.

## MAXIM LECTURES

The subject of Hiram Percy Maxim's lecture before the Automobile Club of America Tuesday night was "Commercial Vehicles." He made special reference to the cost of maintenance under actual service conditions of electric wagons and trucks equipped with the batteries, tires and general equipment which are standard at the present time. He also discussed the cost of maintenance on the basis of the different improvements in batteries which are now under consideration.



On the Upper Thames

MOTOR AGE



MOTOR AGE

Entering a Harbor

# AMERICAN MOTOR LEAGUE

## OFFICERS:

ISAAC B. POTTER, President.  
Potter Building, New York.  
CHARLES E. DURYEA, First Vice-Pres.  
Reading, Pa.  
W. GRANT MURRAY, Second Vice-Pres.  
Adrian, Mich.  
B. W. MERRIHEW, Third Vice-Pres.  
154 Nassau St., New York.  
ROBERT L. STILLSON, Secretary.  
150 Nassau St., New York.  
FREDERICK B. HILL, Treasurer.  
32 Binford St., Boston.

National Headquarters:  
150 Nassau Street, New York

## CHAIRMEN OF NATIONAL COMMITTEES:

LEGISLATION—  
George H. Bidwell, New York, N. Y.  
ROAD IMPROVEMENT—  
E. E. Ogle, Lansing, Mich.  
LOCAL ORGANIZATION—  
Charles F. Potter, Denver, Colo.  
TOURING—  
W. H. Baker, Buffalo, N. Y.  
TECHNICAL—  
Charles E. Duryea, Reading, Pa.  
MEMBERSHIP—  
Frank Egan, New York, N. Y.  
SIGN BOARDS—  
John B. Price, Hazleton, Pa.  
RACING—  
A. G. Batchelder, New York, N. Y.  
PUBS.—  
Joseph Katoctec, Philadelphia, Pa.  
HOTELS—  
Francis N. Bain, Newburg, N. Y.

## OFFICIAL BULLETIN

### STATE ROAD BOOKS

Last week this page contained an extended outline of the three new road books for eastern, central and western New York. Letters are being received at headquarters asking for routes and maps covering other parts of the country. These will be prepared as rapidly as information is received, and will be printed and distributed as soon as the growth of the league makes it possible, and deplorable within the present year. It costs several thousands of dollars to collect information, prepare maps and issue a really creditable book, and this money must, of course, come from the membership fees paid into the league treasury. The league has no other substantial source of income. Another thing to be remembered is this—the league receives twenty inquiries from persons who want information, to one who offers to contribute any. It is not easy for a man in New York to write down the best routes between two towns in West Virginia unless he has first received the information from some one who has been over the route. In a word, the situation is this—give to the league plenty of information and a large membership and road books will follow in abundance.

### ROAD BOOK FOR NEW ENGLAND

The growing membership of the league in New England states warrants the beginning of road book work in that district, and information sent in from New England automobilists will be compiled and used in putting together information and maps for the New England book.

In Maine the league needs accurate memoranda and descriptions of routes centering at Calais, Bangor, Augusta, Rockland, Lewiston, Bath, Portland and Biddeford, and also description of routes connecting populous points along the coast.

In New Hampshire correct routes through the White Mountain district and routes centering at Concord, Dover, Rochester, Portsmouth, Manchester, Nashua and Keens are especially needed.

In Vermont the league asks for routes through the picturesque Green Mountain district and routes centering at St. Albans, Burlington, St. Johnsbury, Montpelier, Rutland, Dorset, Bennington and Brattleboro.

### IN MASSACHUSETTS

In this state the league is fairly well equipped with information and maps, but these should be checked and corrected by re-

vised information. Routes running in all directions from Boston will be gladly received, and routes centering at the following points should be accurately described and sent to headquarters: Newburyport, Gloucester, Lawrence, Lowell, Fitchburg, Marlboro, Quincy, Attleboro, Taunton, Fall River, New Bedford, Barnstable, Dennis, Brockton, Milford, Worcester, Springfield, Northampton, Pittsfield, North Adams and routes throughout the Massachusetts valley.

### CONNECTICUT AND RHODE ISLAND

In these states the league is well supplied with route information, which must, however, be revised and corrected to meet present conditions. To that end routes centering at Hartford, Winsted, New Britain, Torrington, Waterbury, Danbury, Bridgeport, Stamford, New Haven, Meriden, Middletown, New London, Norwich, Woonsocket, Pawtucket, Providence and Newport will be gladly received and acknowledged.

### PENNSYLVANIA ROAD BOOK

The last reliable route book for Pennsylvania was published by the League of American Wheelmen about 6 years ago. Today it serves the purpose of the automobilist in a partially satisfactory way, and much of the information contained in that book may be

utilized for the purposes of the A. M. L., though a careful revision will be necessary. The league asks the automobilists of Pennsylvania to send information and descriptions of routes centering at Philadelphia, Harrisburg, Lancaster, Norristown, Reading, Allentown, Pottsville, Wilkesbarre, Scranton, Shenandoah, Williamsport, York, Johnstown, Pittsburg and Allegheny, Oil City, Bradford, Titusville, Meadville and routes across the Blue, Tuscarora and Allegheny mountains, especially those which connect points in the valley of the Susquehanna river with Pittsburg and other cities on the Allegheny and elsewhere in the western part of the state.

### IN NEW JERSEY

Many New Jersey routes will be included in the eastern New York book, but a special route book for New Jersey is in course of preparation and will be issued as soon as possible. Memoranda describing popular routes in New Jersey will be gladly received.

### FOR THE MIDDLE WEST

The north central states of Ohio, Michigan, Indiana, Kentucky, Illinois, Wisconsin, Minnesota, Iowa, Missouri and Kansas supply an interesting field for touring and the demand for route information in these states is growing from week to week. This information the league proposes to supply as rapidly as possible, and to publish maps and road books for these states as soon as the earnest co-operation of its members and other automobilists can be secured.

### DESCRIBING ROUTES

The automobilist who attempts to describe a route should remember in the first place that his information will be placed before people who are entire strangers to the locality, and for this reason the description should be given in great detail. All small towns and intermediate points should be carefully noted and the distances in miles and fractions of a mile should be set down. The character of the road should be noted—whether macadam, dirt, gravel, clay or pavement—and wherever a point is found where a fork or branch road is likely to confuse the traveler, the proper direction should be carefully noted.

### ROUTE SLIPS

The league is preparing at headquarters and will send out upon request, route slips upon which may be written descriptions of routes from place to place and these slips contain printed hints as to the best and clearest way of preparing the needed information.

### THE AMERICAN MOTOR LEAGUE.

is an organization to promote the interests of all users of motor vehicles; to ascertain, protect and defend their rights; to oppose and prevent the enactment of unreasonable and oppressive laws; to encourage the use of motor vehicles by agitation and instruction; to provide its members with printed routes, maps and guide books by which touring may be facilitated and encouraged; to promote the work of improving the public roads and the erection of proper guide boards, and other signs necessary to guide and warn the users of motor vehicles; to select and appoint official hotels repair shops and supply stations where its members may obtain reliable service at reasonable rates.

### WHO MAY BECOME A MEMBER

"Any man or woman, 21 years of age or over, of good moral character and respectable standing, friendly to the motor vehicle and its interests, shall be eligible to membership."

(Constitution, Article 2, Section 1.)

The League is extending its membership in all parts of the country. We invite all friends of the movement to join and aid in building up a powerful organization.

NO INITIATION FEE. ANNUAL DUES \$2 IN ADVANCE, OR \$3, INCLUDING 1 YEAR'S SUBSCRIPTION TO MOTOR AGE.

"THE ARISTOCRAT OF AUTO CARS"

# F•I•A•T

**Automobiles**  
— AND —  
**Auto Boats**



16-20 H. P. CAR, WITH "KING OF BELGIANS" BODY.

The highest grade automobile manufactured. Made entirely in our factory at Turin, Italy, one of the best equipped on the continent. Motors 16-20 H. P., 24-30 H. P. and 60 H. P., fitted with four cylinders. All the popular styles of body are carried in stock. Special styles built to order promptly. By pressure on a simple foot pedal ignition is advanced and throttle opened simultaneously, in proportion to speed of engine. No other motor is so simple, no other combines so much speed and power with absolute reliability. Made for those who want the best.



**Hollander & Tangeman**

Licensed Importers Under Selden Patent

**5 West 45th Street**

**NEW YORK CITY**

**Sole Agents for United States and Canada**

# MOTOR AGE

VOL. V. No. 13

MARCH 31, 1904

\$2.00 Per Year

## RACING PROMISES WELL



**P**ROSPECTS, the one inheritance to which the human race is always heir, are good for the coming track racing season. Track racing of automobiles has been carried on in some fashion or other for several years. It was given its real introduction the country over last summer, and the country was well pleased with it. It has been acknowledged the new sport and there is no reason why it should not prosper during 1904.

There is something enchanting about the spectacle of railway locomotive races on an oval speedway where every inch of the contest is fought out under the eye of the onlooker. It is a spectacle pure and simple, and the sport of it loses nothing by its spectacular phase. The public in fact, that part which makes up the major portion of the gate receipts, perhaps comes more for the sake of the spectacle than for the sake of the sport.

Even the fact that the competitors dare fate, when they dare each other in some of the speed battles of the new sport, has so attraction for the people. This feature is rather to be deplored than to be credited, for those who have the interest of automobile track racing most at heart do not wish it brought to the level of the arena. It is just to claim for motor track racing a certain dazzling intensity which is possessed by no other racing sport. It is just to claim it to be clean, brilliant competition. It is unjust to the men and the game to try to make of it a killing venture in which the possibility of manslaughter makes

the affair attractive to a certain class of excitement chasers.

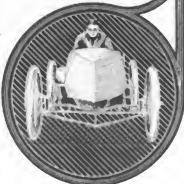
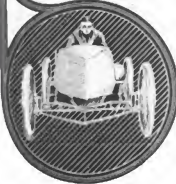
A few accidents occurred last year to throw a damper on the game, but race meet promoters were quick to realize the fact that the danger of racing having been made all too plainly apparent they should take all measures possible to minimize this danger, and the meets of the latter part of the season were notable for precautions taken to secure the safety of the public and the drivers.

It is to be hoped and it is expected that this season there will be no laxity on the part of meet managers in care taken to prevent repetitions of the sad features of last year's sport and it is hence probable that 1904 will furnish a season of clean, unmarred speed contests which will more firmly establish automobile track racing in the community of sporting interests.

We learn by experience always, no matter how wise we are at the start, and the experience of last season, costly as it was, must necessarily work for the good of the game this season. There are even several precautions not taken last fall that can be taken this summer and they should be considered important by those in charge of race meets. Prominent among these is the limiting of the number of contestants in any one race or heat of a race among high speed cars. This can be easily managed, and if the number of participants in any of the class B races or heats be limited to three, there is much less chance of accident than if they are left wide open to six, eight or even ten, as last season.

There is no doubt that six or eight mile-a-minute cars rushing around an oval mile track in one continuous cloud of dust creates an inspiring sight. But the chance of accident, which may mean death, is too great, and it is hotter to limit the spectacle to that of competition of three at one time than to smear the sport with blood and eventually to possibly kill the game entirely.

Last year there were a dozen big race meets at which the stars of the racing fraternity competed. There were two dozen other meetings, some of them as well attended as the big twelve, but not marked by great performances on the track, being the introduction of automobile racing to communities depending upon local talent for the sport. Then there were several other circus-like race meets at county fairs, etc., at which some of the professionals drove hippodrome races for the edification of the





countryside. The two big centers of the racing were the Empire City track at Yonkers, N. Y., and the Glenville track at Cleveland, two of the best trotting tracks in the country and two of the best localities for drawing large crowds. There were three meets at Yonkers and one of 2 days' duration at Cleveland. The other ten of the dozen prominent meets were held at Boston, Detroit, Syracuse, Providence, Brighton Beach, San Francisco, Los Angeles, Columbus and Louisville.

The Louisville meeting was not really in the class of the others, as its speed racing was made solely by two professionals, but it was the introduction of the sport to the south and was so picturesque in its setting and conduct and so peculiarly enthusiastic in the way the uninitiated grasped the possibilities of the game, that it deserves a place in the list. Both San Francisco and Los Angeles had meets early in the summer, but these were not notable, on account of being races of local motorists only, and the big meet of the year at each place was that in the fall, when Barney Oldfield drove his Bullet II at record breaking speed in competition and in exhibitions, and finally placed the world's officially timed track mile record at 55 seconds.

At all of these meets the attendance was excellent and the spectators in every case seemed well pleased with the sport. Wherever there were 2-day meets, as at Cleveland, Detroit, Syracuse, San Francisco and Los Angeles, the attendance the second day showed that the town's acceptance of the sport the first day had been sincere.

The season opened Decoration day with meets at Yonkers, Boston, Dayton, O., and Denver, Col., those at the two latter places being made up of local competition. The start-off at Yonkers was the beginning of Barney Oldfield as track star and record holder. He came from Detroit with the big Ford racer and a red coat, the combination of machine and man a curiosity to metropolitan enthusiasts who had not quite grasped the possibilities in Barney since his sudden break into the game the previous fall, when he won the race for the manufacturers' challenge cup at Detroit. Their curiosity was satisfied, however, when he not only cleaned up the open races of the day, but took the mile track record away from Alexander Winton by circling the oval in 1:01½. The other prominent competitors in the speed class races at this meet were Joseph Tracy, driving J. Insley Blair's newly imported Panhard racer; Albert C. Bostwick, Mercedes; F. A. La Roche, Darracq; C. G. Wridgway, Peerless; Alfred Poole, driving Lawrence Waterbury's Mercedes, and Lafayette Markle, Mors.

The Boston meet the same day was characterized by speed racing among special light steam racers and by spirited competition among cars properly belonging to the pleasure class. The steamers making the speed sport were those of Messrs. Stanley, Grout and Cannon, and the veteran builder Stanley, with a dinky little flatboat on wheels made the best showing and cut the steam track record for steamers to 1:02½.

Fourth of July saw the much sought mile in less than a minute, and again the central figure of the event was Oldfield. On his same old monster—wider, longer, more powerful than

any other car then in track racing—he cut the standard mark of speed twice, first to 59½, and then to 56½ seconds. This was at Columbus, and the driving of these record exhibitions, which also included the 5 and 10 and intermediate mile marks, made such an impression that the automobile elubmen of Columbus gave another meet later in the summer.

But before speed racing came again to Columbus it went back to the Empire track, once more as an opportunity for Oldfield, who cut the mile record to 55½ seconds. But here new stars began to twinkle. F. A. La Roche, with a light Darracq, appeared as a dangerous competitor to Oldfield, while three young Frenchmen, with cars light enough to enter middleweight class races, became worthy candidates for free-for-all honors. They were Henri Page, Decauville, a mere boy, new to track racing, but having had the road racing experience of the ill-fated and interdicted Paris-Madrid race of last spring; Jules Sincolle, Darracq, who was also in the same road race, and George Papillon, Darracq. John Wilkinson, of Syracuse, made a winning debut with an extremely light racer, adapted from the regular construction of the Franklin cars.

Then came Louisville, with its local racing and its exhibitions by Oldfield and Harry Cunningham, the latter during the sickness of the owner, Tom Cooper, driving the twin to Oldfield's car. This was the last appearance of Oldfield on this machine, as he had already been engaged to drive the Winton Bullet, and was



thenceforth to pilot on the track one or the other of the two machines which had taken part in the James Gordon Bennett international cup race in Ireland.

Early in September the greatest of all western meets was held on 2 days at the Glenville track, Cleveland, one of the best ovals in the country and especially well suited to motor car racing on account of being a trotting track and with less cushion than that of the average running track. This meet brought together several of the most sportsmanlike losers in the country, men who appeared on the track race after race, knowing well enough that they were to race for second honors, while Oldfield, in the home town of the machine he drove, was to gallop ahead to pluck the most desirable laurels. These men were Page and Sincolle, with their French cars, and Schroder, of Cleveland, on a Stearns. Outclassed in point of power and possible speed the two Frenchmen went on to Detroit the next week to fight hard for what they could get. At both of these meets there appeared several light cars fast in their classes and running closely behind those of the middle weight and free-for-all classes, prominent among them being the Olds Pirate, driven by Dan Wurgis.

At Detroit Harry Cunningham made his debut as the driver of the Packard Gray Wolf, while Cooper appeared for the first time in real competition. Honors were pretty well divided at this meet, but there were no fast times owing to the heavy track. It had rained hard and the surface was rough and only partially dried. Added to this disappointment were accidents, caused mainly by the track condition. The

wind-up was a fatality, caused by the exploding of a tire on one wheel of Oldfield's car just as he was rounding the last turn. The car dashed across the track, through the fence and into the crowd. One spectator was killed.

The Baker election on account of a collision had injured two men at Cleveland, and shortly after the Detroit meet, Frank Day, the young driver of one of Cooper's racers at the state fair at Milwaukee, was killed in the dashing into a fence of his car. Then, about the same time, a tire explosion caused Carl Fisher's Indianapolis-made Mohawk to dash into a crowd at the fair at Zanesville, O., fatality resulting.

Track racing at this point was in a dubious condition. Several persons killed, others injured, cars wrecked and drivers injured or scared, there was a prevailing doubt of the continuance of the sport. The realization of the fact that it was not the racing, but the conditions under which it was conducted, in which lurked danger, soon came, however, and the sport continued, with managers taking precautions to keep spectators away from the track and in other ways seeking to mitigate the danger of the sport.

Then the circuit swung eastward again, to Syracuse, where the local motorists had made extensive arrangements for a meet at the time of the state fair. Sincolle was offered the chance, so long deferred, to make successive wins. Running closest to him was La Roche, while in the light class Wilkinson and Wurgis were the heroes. Oldfield and Page did not drive here, the meet coming shortly after their accidents at Detroit.

Providence did not see the greatest speed, but it saw the closest competition of the summer. Sincolle having returned to Paris, Page and La Roche were more keenly pitted against each other, with Decauville and Darracq respectively, with a third element, Charles Schmidt, driving the Gray Wolf, thrown in to make hard-fought triangular battles. La Roche's flyer came out slightly ahead. In the steam class, Cannon, the Harvard student, with the racer he built, was leader, while among the light gasoline racers Wilkinson's car had everything to itself.

Oldfield again appeared at the third metropolitan meet at the Yonkers track. He could not get for the Bullet the mile record he had made with his old car, but he broke the 10-mile record and several intermediate distance records, and won the 15-mile free-for-all, only to be disqualified on account of having driven as a post-entrant. This gave Page the race, with Schmidt, on the Gray Wolf, second, a relationship which also prevailed in two other important races. The disqualification of Oldfield was afterward reconsidered and he was given the cup.

Wind-swept Brighton Beach was the scene of the closing meet of the east. The track was in abominable condition, but the racing was good, though dangerous. At this meet a new winning combination appeared, Berna, driving a recently imported light Renault. Berna, with La Roche and Champion, the latter on the Gray Wolf, put up most of the speed class races and the new comer demonstrated himself and car to be a likely pair to give Oldfield's hard tussle later on. In a spill on the turn Champion was seriously injured. In November the sport





had its final inning on the Pacific coast, and at San Francisco and Los Angeles Barney Oldfield was the chief performer. The "Frisco meet was extended over 3 days and was an enthusiastic affair, with much good local racing sandwiched in between the slices of speed work on Oldfield's part. At a 2-days' meet at Los Angeles Oldfield cut the world's mile track record to 55 seconds flat, thus having broken this record at both the opening and closing big meets of the season and three times between. A supplement to the Los Angeles meet was run the Sunday following, under different management and then Oldfield rode a mile in 54½ seconds, but this was not allowed as the meet was unseasoned.

Since the ending of the last track racing season many new speed merchants have appeared at speed trials and the list of aspirants for speed honors will be greatly augmented this season, even more so than can be forecast now, for it is a fact that several manufacturers who have never before been in the game are preparing to enter it heartily this summer.

Among those who were prominent last season and who will probably be seen again this summer, are Barney Oldfield, Winton Balliet; H. C. Bowden, Mercedes; Joseph Tracy, Peerless; Charles Schmidt, Packard; F. A. La Roche, Darracq; M. G. Bernin, Renault; Louis R. Ross, Stanley steamer; George C. Cannon, Cannon steamer; O. W. Bright, Mercedes; Albert Champion, Packard; F. L. Stanley, Stanley steamer; Harry Harkness, special model car; Lafayette Markle, Napier; John Wilkinson, Franklin; F. L. Tischer, Tischer; and Kenneth A. Skinner, de Dion.

Among the newer ones to tackle track racing will be probably E. C. Haasman driving the veteran Ford racer; S. B. Stevens, Mercedes; E. Fredericks, driving B. M. Shalley's Deauville or Mercedes; Otto Neumann, Stevens-Duryea; James L. Breese, Mercedes; Walter Christie, Christie; W. J. Hastings probable driver of W. C. Baker's Baker electric; M. W. Ehrlich, driving J. Insley Blair's Packard; E. C. Bald, Columbia; William Wallace, De Dietrich; John Fisher, probable driver of Orland Weber's Pope-Toledo.

It is almost certain that the White Sewing Machine Co., and the Olds Motor Works will continue in the game while the E. R. Thomas Motor Co. and the Geo. N. Pierce Co. promise to enter and Peter Cooper Hewitt and Alden Sampson II. say their special cars will be entered in track races. W. K. Vanderbilt may race and the new 100-horsepower Buftum car is sure to appear. Hollander & Tangeman and the Sidney H. Bowman Co., as importers, respectively of the Fiat and the Clement, will be on hand to dispute open events.

Altogether the list of real speed merchants will be large and the season's racing will be a lively scrap for track honors.

#### FIRST MEET IN FRANCE

Alexander Burton's 100-horsepower Gobron-Bruille won both the kilometer standing start race and the 500 meters hill climbing contest at Cannes, France, March 15. It was the first meeting of the season in the south. Burton's time for the kilometer was :46½; De Costi on a 60-horsepower racer was second in :48½; and Durand on a 40-horsepower Mors was third in :56½. In the hill-climbing contest A. Burton covered the 500 meters in :33½, De Costi in :36, Ingilbert on a Peugeot motor cycle in :38½, and Durand in :41½.

## INTERNATIONAL FLAVOR

### Vanderbilt Cup Race May Have Some of Gordon Bennett Cars as Contestants—Race Talk

New York, March 28—Chairman Pardonington, of the racing board, expresses the utmost confidence that the A. A. C. will be able to run the 300-mile race for the Vanderbilt cup on Long Island. In a talk with a Motor Age man the other day he said the race would not be run probably before September, and certainly not until the international cup contest of June 17 had been decided.

Mr. Pardonington evidently wishes to give the American cars competing in the Gordon Bennett race time to return to this country, and also cherishes the ambitious hope that the contest will be of sufficient importance to induce some of the foreign makers to send their cars over for the trophy. The fame and advertisement that will come to the winner of the race should be an incentive to European competition in view of the present magnitude of the American market for imported cars and the strong competition that is now on among the importers.

Mr. Vanderbilt has received such positive assurance of the possibility of promoting the race that he has given Tiffany the order to submit to him designs for the trophy. It is reported that Mr. Vanderbilt's next appearance in competition in this country will be in the Mt. Washington hill climb, in connection with the Bratton woods track tournament in July. It is likely that his new 120-horsepower Mercedes, ordered from M. Charky during the Ormond meet, will be given its first trial on that occasion.

As was strongly hinted in last week's Motor Age would be the case, Alden Sampson II, the first entrant for a position on the cup race American team, has formally notified the A. A. C. racing committee that he will be unable to complete his candidate car for the American team in the international race in time for its inspection by the committee on April 15 or the subsequent speed tests at Ormond. The contents of the letter of withdrawal are withheld until after its consideration by the committee at a meeting, which will probably be held this week. A dispatch from Pittsfield, Mass., where the racer is being built, however, gives as a reason the tardy delivery of certain forgings and parts entering into its construction.

This leaves the Hewitt car and one Peerless car as the only regular candidates for the team. The racing committee, though, has under the rules unlimited power in naming a team of one, two or three representatives. It will give, of course, the regular candidates the first chance to "make good." It can reject either or both and add one or more of the other two Peerless cars to the team, or it may go outside of the candidates altogether for members of the team. The A. A. C. has fulfilled all conditions by notice that it will name a team of three or less.

The present situation leaves much room for speculation as to the possible composition of the American team and the drivers of the cars. It will be all guess work until after the Ormond trials.

It is now reported that the Virginia Beach

course will be tried out early in June through the medium of a race meet, in which Norfolk, Baltimore and Washington cars will be invited to compete. There is also some chance of private trial of the course by one or more metropolitan racing cars next month.

Manager Owen, of the local Franklis agency, says that John Wilkinson will have two racers completed in time for the Decoration day meets. One will have the 24-horsepower touring car engine fitted to a racing chassis and be eligible in the middleweight class. The other will be of 10-horsepower and of the lightweight persuasion.

H. L. Bowden, of Boston, is reported here to be having the Mercedes he drove at Ormond altered for track racing. The seats are being dropped to a lower level and a wind cutting arrangement of the bonnet and tanks is being made.

Two more cycle racing stars are to be drivers in automobile speed contests the coming season. Joe Nelson has entered the employ of the American Darracq Automobile Co., and will drive one of the racers F. A. La Roche is to import. It is reported that John Fisher, of Chicago, will drive Orlando Weber's Pope-Toledo on the track.

Hollender & Tangeman have arranged to import next month a 60-horsepower Fiat racer, a twin model to the cars to be used by the Italian team in the international cup races. If it reaches here in time it will be sent to Ormond for records at the time of the American team trials. It will weigh less than 1,800 pounds and so be eligible for a try at world's records for middleweight cars as well as all around best figures.

It is reported here that Henry Ford is building another racer, which will be sent to wipe out the 39-second record made by Vanderbilt at Ormond. To accomplish this feat Mr. Ford has but to turn out a machine that can cut by three-fifths of a second the 39½ figures scored by 999 on the ice last winter.

#### A. A. A. M. L. CONSOLIDATION

New York, March 29—There is every chance that the American Motor League and the American Automobile Association will shortly be amalgamated. Ever since the Chicago show President Potter, of the A. A. M. L., President Whipple, of the A. A. A., and two or three others high in the councils of their respective organizations, have been in negotiation to this end. It is admitted that the plan of consolidation is well on toward satisfactory completion, and that the rough places have been made smooth by mutual concessions. The amalgamation scheme when finally whipped into shape will be submitted to the executive boards of both bodies for endorsement and then referred to a mail vote of both organizations for ratification.

No opposition has developed here to the consolidation and the absence of any disclosure of the terms of amalgamation the scheme seems to meet with very general approval by members of both organizations and the fraternity at large so far as New York opinion and the meager information received of the feeling in the matter of the clubs of other cities goes.

The conferees are naturally reticent and wish to avoid discussion and criticism of the consolidation idea until the full terms can be made known and intelligently considered from every possible point of view.



# MOTOR AGE

Published Every Thursday by  
THE TRADE PRESS CO.  
1303 MICHIGAN AVENUE CHICAGO  
Telephone Calumet 7011

New York Office, 115 West 19th Street,  
London Office, American Publication House,  
58 Market Park E.D., Harlequin, N.W.

Entered as Second Class Matter  
October 3, 1911  
Post Office at Chicago, Ill.  
Acceptance for mailing at  
special rate of postage provided  
for in Act of October 3, 1917  
Authorized by Post Office  
Department

Second Class  
Postage Paid  
at Chicago, Ill.

Special  
Carriage  
Postage  
paid by  
addressee

Entered at the Chicago Post Office as Second  
Class Mail Matter

Subscription, Two Dollars per Year  
Foreign Subscription, Four Dollars

Any Newsdealer may obtain Motor Age through  
the Western News Co., Chicago, or any  
of its branches, on a retailable basis

## THE RAILROADS' ALLY

**I**S THE automobile an ally of the railroad? This depends a great deal upon the automobile. If it is a pleasure automobile, used by its owner for interurban travel which might otherwise be made upon trains, it requires a broad-minded man to see the distant good that the automobile will do railroading inductively.

This phase of automobilizing as it relates to railroad travel is not so important as that of the business automobile as it relates to railroad traffic.

Whether for hauling passengers or for hauling goods, the commercial automobile as a feeder for railways is bound, sooner or later, to become a great factor in transportation.

The railways of the country should recognize this soon. It means not competition for them, but assistance. It means increased travel and increased shipping. It means more convenient travel and more economical shipping.

Travel and shipping grow, the one directly as the increase in convenience, and both inversely as the decrease in cost. It is not probable that the automobile will ever become direct competition with the railroad in the matter of overland express traffic. This is the railway's field.

Interurban traffic and city traffic are the field of the automobile. To whatever extent the automobile injures the railway in this field, it more than repays by the co-operative service in the other.

Modern traffic is bound to progress by the old law of selection of the best.

If one system is reduced in certain phases to make way for an improved system, it is better for society that the capital and energy formerly expended in the development of the diminishing branch, be expended upon the development of the bigger feature which remains the system's undeniable right.

## COMPETITION FOR FRANCE

**S**OME of the French automobile papers are tooting the French horn in the Briton's face because S. F. Edge in an English trade journal expressed the opinion that English automobile manufacturers need no longer exhibit at the December Paris show. The French editors tangle two opinions in-

consistently. They stick tenaciously to their belief in the wonderful supremacy of French cars and assure Mr. Edge and the Englishman at large that if they think they have become so expert at automobiles building that they can rival France they are badly mistaken. Then the Britisher is told that if he wants to sell cars in France and in other continental countries he must come to the Paris show, the natural buying center of the European trade.

To have consistently followed out the first conclusion whereby England is shown to be in the freshmen class alongside of France, senior, the Parisian editorial writers should have summed the question of exhibiting at the French show by saying, "Don't, you stand no chance to sell your old English cars here, anyway, and by exhibiting here simply waste your money."

By telling England it must exhibit at Paris to sell cars in France, France virtually admits English cars can be sold in France in competition with her own much lauded paragon.

The loyal editors would have been near the whole truth had they stuck to the eminent supremacy of Paris as a selling center, admitted or let it be taken for granted that many countries build cars which can sell in direct competition with French cars, and then boomed the snail d'automobile in the Grand Palais as the place to come to get in the game.

There is no doubt that the motoring roads of all Europe lead to Paris. Let it be so. It is the natural and just heritage of Paris to be the commercial and sporting center of European automobilism. It is natural that its show should be the great international exhibition of Europe, the place where the nations display their wares to gain continental trade.

It is overdoing the matter, however, to deny competition in the same breath. There is competition for France and there will be more of it—competition right on l'Avenue de la Grande Armée and many of the trade names comprising that competition will be American names.

## MOTOR CAR SALESROOMS

**T**HE sensible buyer selects a car upon its merit. He does not select it upon the quality of the wall paper of the salesroom. But even sensible men are first attracted to a thing by its appearance and environment.

While it may not be right, it is true that the majority of men draw their first conclusion of a thing by the company it keeps. It is only human nature to suppose that a well kept, attractive store will be the home of good automobiles.

This is an unsafe conclusion, for while the seller of a really good car is very apt to take enough pride in that car's goodness to place it in fit surroundings, the fussy seller of a poor car may play upon the weakness of human nature by furnishing his store better than any other store in town.

For the sake of pride in the reputation of a good car its seller should place it before the community in just as attractive a manner as possible. He should not allow the seller of a poorer car to take precedence in public favor. The initiated buyer may not care for the trimmings. The uninitiated purchaser is more liable to seek merit in attractive surroundings than in places where hidden merit is its own only recommendation and advertisement.

Great fame may slouch around in uncouth

attire. A record breaker may shine in a dirty shop. But an unequalled reputation cannot sell all the cars, nor can it always sell the cars which claim it.

Ordinary business methods must prevail in the end and such methods include the practice of attracting the probable purchaser. A bright, clean, well kept store with a tastefully dressed show window is one of the surest ways to draw the attention of the general public to the goods within.

There are now three kinds of automobile stores. One is the genuinely attractive kind. Another is the genuinely dirty, ill-kept kind, whose proprietor seems to dare the public to criticize on account of the fact that the cars sold in it are the "real thing." The third kind of store is the somber looking store, eminently dignified and dark, a sort of commercial senility, when entering which a man feels as though he were about to wake the dead.

There is no argument concerning which should be the prevailing kind.

## CHICAGO'S TRADE CENTER

**T**HOSE automobile trade pioneers built better than they knew when they started the automobile colony on Michigan avenue, Chicago. The colony has steadily grown and has become the most closely congregated automobile trade center in the country.

Michigan avenue is pre-eminently the city's most important boulevard. It runs right into the business heart and but a bridge and a few blocks of bad pavement separate it from the great Lake Shore drive on the north side. This pavement will be relaid some day and then on long stretch of boulevard will extend clear from the southern edge of Chicago to its northern edge—beyond to Evanston and Fort Sheridan and soon straight to Milwaukee.

The upper terminus of present Michigan boulevard is the business center of the city. Along its west side there are many of the best hotels—the east the lake front park and the art institute.

Going southward, the automobile club house ranks first among dozens of old, aristocratic residences remodeled into buildings of more modern and more commercial usefulness. Soon on the way down this wide asphalt straightaway is the Michigan Central and Illinois Central railway station.

The automobile stores have already appeared and now they are found on both sides of the street for blocks. They are excellent stores—most of them in new buildings.

A more consistent trade center could not have been selected. Right on the main artery of Chicago's immense boulevard system the stores are passed daily by the thousands who use the boulevards most for vehicle travel.

It would be no wonder were Michigan boulevard to become world famous as an automobile street, for in no other city in the world has the automobile trade occupied such a place of vantage for the purpose of linking their own interests with those of the street upon which they thrive.

Paris has its Avenue de la Grande Armée, with its parallel highways for horses, motors and men. But it has its other boulevards—its Avenue du Bois de Boulogne and its Avenue des Champs-Élysées—and this one does not provide for its motor car trade the undisputed local supremacy which Michigan boulevard, Chicago, gives the automobile trade.

# JUMP

Big tires save big bumps, financially as well as physically.

It would do a New Yorker's heart good to see Chicago's streets now.

For that tired feeling drink denaturalized alcohol—direct from the carburetor.

Just before Decoration day is when each maker's new track racer runs the fastest.

The greatest thing on wheels in 1904 will be the tour to the St. Louis world's fair.

The good roads promoters should visit Rome and learn to make roads "like their father's used to make."

The Honorable Lou G. Winter says: "Well, I have those anti-freezing mixture concerns a good run for their money, anyway."

What a jolt W. R. Hearst's presidential boom would get if all of his "labor" constituency knew he was an automobilist and published an automobile paper.

If a member of the Swiss team should win the international cup race in June, that old advertising phrase "Made like a watch" will probably come into use again.

Promoters of tours to the international cup race advertise that the lump sum named as cost includes tips. They should have said, "The charge for tips with expenses included."

Now that some of the other papers are seeking to emulate MORON AOR in the art of distinctive cut making, some fearful and wonderful examples of the engraver's handiwork are being produced.

A young man came into the MORON AOR office the other day and wanted to be put into communication with some automobile manufacturer who wishes to build a racing car. He said he could build a car that could break the mile record and is willing to show drawings which will prove it!

The automobile school is as yet a novelty. It is not expecting too much to hope that some day it will be a feature of ordinary educational facilities. The principles of action of a steam engine are found in every natural philosophy text book in the land. Why not those of the internal combustion motor?

America has not yet produced any women who have expressed anxiety to participate in the Gordon Bennett eliminating trials, but there are doubtless a number of scabrettes who will announce their intentions of taking a shy at the trials when their enterprising press agents hear that such action will not be permitted.



The advocates of the Bontell bill now in congress, which provides for the removal of the internal revenue on alcohol for industrial purposes, are endeavoring to gain the support of the automobile industry. There is no reason why this support should not be given. The development of the alcohol motor is a promising endeavor. Its possibilities cannot be reached without commercial incentive. Commercial incentive depends upon commercial economy.

The south has become immensely interested in automobiles. This is good for the south. Interurban railway service is not as extensive there as in the north. The automobile opens a new way to market and a new way of local communication. The automobile in its strictly useful forms can do much toward developing the south.

Automobilists are on the wrong tack in seeking to secure more sensible laws. They might do better by letting any old kind of laws be made, and then learn from Alderman Brennan, of Chicago, and a few other municipal celebrities how to make the pull mightier than the law.

What an assortment of tags there will be on the back ends of the cars of the St. Louis tour. How proud the country should be to have the representatives of her greatest new industry collectively branded as thieves within the gates of her universal exposition!

Enthusiastic promoters of automobile track race meets this summer should not forget the lessons learned last season and should take pains to provide as far as possible against deplorable accidents such as marked last year's sport.

Some of the enthusiastic new members of the Chicago Automobile Club want to hold a hill-climbing contest. Logan monument on Michigan avenue has been suggested as the most difficult grade to negotiate in Chicago.

An automobile dealer advertised "our cars are never pulled home." An ankaid customer replied on a postal card, "That's because you are too mean to furnish a rope. We have to push them back."

Forty-five miles an hour is the latest proposition in automobile boats, and the returns from the back counties are not all in, either. Where are your torpedo boats and Kaiser Wilhelms now?

Automobile dealers at Washington are endeavoring to interest statesmen in automobilizing. They will find it more profitable to interest politicians.

The mile track record was broken six times last season. How many times will it be broken this season?

The proprietor of the Nichols house, Bath, N. Y., should take note of the fact that the

# SPARKS

metropolitan division of the St. Louis tour passes his way the latter part of July.

This will be a season of air-cooling demonstration and by fall we ought to know to what extent air-cooling may be safely carried.

Bronx de Caters will try to break Vanderbilt's mile record of 39 seconds. Well, Europe, we will be sportsmen and applaud with you if he does.

The heaviest trucks in the A. C. A. commercial vehicle test next week will carry beer in kegs. They should be assigned as pace makers. My, what a lot of blue ribbon winners there would then be!

Some day it is to be hoped that buyers will select cars according to the amount and kind of work the cars can do and not according to the kind and quantity of horsepower which the cars develop in the printed matter.

A Chicago lady with a mission is about to start a school of story-telling. It is respectfully suggested that she attend a few automobile shows and select her staff of "professors" from the salesmen who have "disposed of the entire output of the factory."

Which does the horse the greater injury, the man whose automobile scares the horse or the man who hitches up the horse and drives him around where he is bound to be scared? If the horse were on a salary and had a few holidays in which to spend his earnings it might be a different matter.

If the track racing rules are maintained this season in their present form, it would be well for both race meet promoters and racing board officials to see to it that the class regulations are enforced. There are a few items about reverse gears, bodies, etc., which were shamefully neglected last season.

The National Association of Automobile Manufacturers has written to all its members asking their respective opinions concerning the most suitable date for the next New York national show in Madison Square garden. The member is asked to make his choice from eleven different dates. With 130 members selecting from eleven dates there should be no trouble whatever getting together in this matter.

Franklin Webb, of El Paso, Tex., comes forward with the suggestion that the proper way to capture too-speedy motorists is to lariat them. He says lariat throwing is splendid exercise, as it develops the shoulders and lunge, and more than that the judgment of distance. He hedges a little and protects home industry by adding that he would advise the city men to stay home and practice the gentle art of lariat- ing on motorists, and not go west and attempt to make a fortune roping cows.



## REX AND COMUS LOSING

### New Orleans People Find New Idol in the Racing Automobile—Have Had Good Sport

New Orleans, La., March 25.—The followers of Rex and Comus have found a new idol in the automobile, and the enthusiastic greeting given it at the first race meet here Saturday and Sunday demonstrates that even the Mardi Gras carnival will have to display more than the usual amount of energy in order to remain the first sport in the hearts of the southerners. The society people of New Orleans have extended a welcoming hand to the automobile and have made it the king.

The gathering on Saturday was the largest ever had of the representative citizens of the city with the exception of the Mardi Gras crowds. Over 5,000 people passed through the gates and the management was agreeably surprised at the unexpected throng. Every box in the grand stand was filled and there were but few vacant seats in the entire building. The field was crowded with automobiles.

The races were late in beginning as the local automobilists were particular to get their machines in good running order before going on the track. Although there was considerable interest in the local contests the chief attraction for the crowd was the Oldfield and Hansman races. When these men appeared on the track the enthusiasm broke loose. The best mile was made by Oldfield in his exhibition, the time being 58 seconds.

The first race on the program was for Winston touring cars, with but two entries. These were the cars of Charles Graham and Underwood Moss. This was the first experience for both men and the machines hardly developed their full speed. Graham led about 50 feet at the finish, the time being 5:23 for 2 miles. Each car carried four passengers.

The second race was 1 mile for Cadillacs, with one passenger. There were three entries, J. E. Doerhofer, Lewis Doerhofer and R. S. Soule. J. E. Doerhofer's car would not run after it got on the track, and the race was finally made by the other two cars. Soule easily distanced his competitor, his time being 2:48.

After the excitement incident to the under-a-minute exhibition by Oldfield the crowd prepared to see some more comparatively slow going by local wind splitters. Two White steamers with four passengers each were entered in the next event for 2 miles. The machines were driven by W. C. Faust and Samuel Stone. Stone was unable to get up more than 150 pounds of steam, so that Faust walked away from him, defying death and danger of all kind, making the 2 miles in 5:43.

George Rose, of New York, then drove an exhibition mile with a French car, making the mile 2 minutes. Housman with 999 followed and his odd-looking machine was the subject of much comment on the part of the curious spectators. The motor was not in good working order, and the best time for the mile was 1:05. Housman announced that he would take the car from the track and get it in better condition and return later.

The Rambler event which followed had five entries. The race was for 2 miles and was

won easily by H. L. Stout, with Guy Stone second and Tom Goreau third. Time, 4:51. Housman went on the track and made the mile circuit in 1:01.15.

The principal race of the day was that of Oldfield against his own record of 9:35 for 10 miles. The run proved exciting to the southerners, but the record was not disturbed. The official record by miles was as follows: One mile, 1:58; 2 miles, 1:57; 3 miles, 2:55; 4 miles, 3:54; 5 miles, 4:53; 6 miles, 5:52; 7 miles, 6:52; 8 miles, 7:53; 9 miles, 8:51; 10 miles, 9:53.

On Sunday Oldfield cut a fifth of a second off his best time of Saturday by circling the rather poor track in 57.4 seconds. He also beat Housman in two 5-mile heats of a match race.

The Sunday crowd was large and enthusiastic and the Picayune says it was composed of society's bravest, handsomely gowned women being profusely scattered through the grandstand and in the hundred automobiles that lined the infield fence.

The original program of races was not carried out as many of the local entrants had their feet packed in ice. The first real race was a match between Palmer Abbott and J. W. Richardson with Oldsmobiles. Abbott won easily in 5:39. Then John and Lewis Doerhofer raced their Cadillacs to the credit of Lewis who toured the 2 miles in 4:56.

The crowd lost track of its equanimity as Oldfield on Winston Bullet II and Ed Housman on 999 appeared for the first heat of their 5-mile match. It was an expectant, breathless moment for the new south, and the local scribes anxious to make the most of an opportunity to tackle a new variety of web press rhetoric, dashed vehemently into the wonders of such a spectacle. Housman got off poorly, then stopped and the race was restarted. This time the new 999 took the lead but was soon overhauled and badly beaten, the machine not running well. Oldfield's time was 5:02.

While Housman was getting his car into better shape for the second heat the Doerhofer brothers, Cadillacs; Dr. Pratt, Rambler, and Jules Mehlig, Knox, engaged in a mile skirmish. Dr. Pratt won in 2:15.

In the second heat of the match Housman's car ran better and the race was see-saw for several miles. Oldfield finally drew away and won by a quarter-mile. The time was 5:19. The fastest mile of the day was the third of the first heat, run by Oldfield in 1:57.4.

The local persons were well pleased with the racing and propose to have another and more elaborate meet in the fall.

### ROAD BILL FAVORED

The ways and means committee of the New York legislature decided to report favorably on the Burnett-Armstrong bill, which as originally drawn appropriated \$2,000,000 for good roads. This figure was reduced by the committee to \$1,500,000. Of this about \$400,000 is to be expended under the provisions of the Fuller highway law and the remainder under the provisions of the Higby-Armstrong act.

### EQUAL TO TRAIN SPEED

Last week George A. Kossler, of New York, drove a 60-horsepower Mercedes car from Biarritz to Madrid, Spain, a distance of 300 miles, in 11 hours 10 minutes, beating all previous records by several hours.

## HUB TO HAVE HILL CLIMB

### Classification Made on Basis of the French Method, By Weight—Boston's St. Louis Tour

Boston, March 28.—The interest in the hill-climbing contest of the Massachusetts Automobile Club, to be held on Commonwealth avenue hill on the afternoon of April 19, has increased tremendously since the closing of the automobile show, and the close followers of the sport are now figuring on what is the best gear to use for this contest. In the meantime, however, Chairman Wallace, of the club racing committee, is busy making preparations and getting out the entry blanks, which will be ready for distribution by the middle of the week. It has been determined to hold five class climbs, and that machines shall be classed according to the French system, which is as follows: Class A, for vehicles weighing over 2,205 pounds; class B, vehicles weighing between 1,433 and 2,205 pounds; class C, vehicles weighing between 815 and 1,433 pounds; class D, vehicles weighing between 515 and 815 pounds; class E, vehicles weighing between 110 and 515 pounds.

It will be seen that the classes are governed entirely by weight and that the power does not this year enter into the classification. This is according to the racing rules of the A. A. A., which provide that all machines shall enter one class irrespective of power, so that for the first time in this section, gasoline, steam and electric vehicles will be found contending one against the other on equal conditions.

The rules governing the contest also provide that vehicles of classes A, B and C shall carry at least two passengers, side by side, the minimum weight to be 132 pounds per passenger. It is understood that in cases where the mean weight of the passenger does not reach 132 pounds the deficiency must be made up by ballast. The weight of the vehicles in the several classes shall be computed in the empty state.

By way of exceptions in races on the track and for record making vehicles seated for two persons will be allowed to be occupied by one person only, but the necessity for two persons is indispensable in races on the roads. The entries close with Chairman Wallace, 95 Kilby street, April 12, the fee for each event being \$5. In making entries correct information must be given, as on this basis only will prizes be awarded. There will be one prize for each class, providing there are at least three starters.

Mr. Whipple will enter his powerful foreign machines, while H. L. Bowden will also enter one, if not both, of his record breakers. L. J. Phelps, who now holds the flying start record for the hill of 27 sections, will likewise be on hand to defend his title, while Jack Snow, the winner of last year's contest, is determined to renew his success of a year ago. W. E. Eldridge is determined to be on hand with a fast hill climber, while Frank O'Neil will again try his luck with his foreign car. It now looks as though the field of entrants will be much larger than was the one of a year ago, when the hill was given its first mark.

The New England division touring committee of the A. A. A. which was recently organized to arrange the New England section of the tour to St. Louis, has taken hold of the

matter in a manner that presages success. The committee has already mapped out a great amount of work for itself, work which when completed will be of vital importance to those who propose to take the pleasure trip from Boston to the St. Louis exposition in automobiles.

It is already in communication with the clubs of New England, and judging from the reports received therefrom there is no question that New England will have a representative delegation on the run. The preliminary arrangements for that section of the course running from Boston to Albany, a distance of 204 miles, will be in charge of the New England committee, and it is proposed in the very near future that Chairman Glidden, accompanied by the secretary of the committee, shall tour to Albany, lay out the course, and make the necessary arrangements at the noon and night stops. The best course will be selected.

It is more than probable that during the run the trail will be laid by confetti, which proved so serviceable in the recent endurance contest, and which proved of greater value to the participants than did the erection of sign boards in the run of 2 years ago. Confetti once laid will remain on the ground, while signs are apt to be removed or twisted by youngsters, and others who delight to torment the automobilists.

In the party which will start from Boston will be President Whipple, of the A. A. A., and a number of local automobilists, many of whom have already signified their intentions of taking their vacations this way. It is possible that on each half day of the run a division marshal will be appointed, and the cars engaged in the run will be requested not to pass the marshal's vehicle. At the noon control the marshal will be changed, so that on the 2 days following the New England division will, in all, have four marshals.

Chairman Post, of the national touring committee, who is now making a trip over the route from New York to St. Louis, is expected in Boston in about a month, and he will bring with him the details of the trip as laid out by the committee.

#### FRENCH CLUB BENEFITS

Within the last few months several French automobile clubs have started manufacturers by adding a special storage room to the club houses, in which is kept a full supply of tires, lamps, horns, gloves, and other articles which an automobilist might need at any moment. The Automobile Club du Dauphine was the first to make this change.

In a recent address by President Camlon, of the Automobile Club du Rhone, in France, he pointed out that the fact of an automobilist being a member of the club means a very appreciable saving to him. If the motorist is a member of the club, the expenses will run as follows: Garage, \$60; insurance, \$33; 3,170 pints of gasoline, \$114; two pairs of tires complete, \$125; 330 pounds of lubricant, \$18; total, \$360, thus making a difference of \$135 in his favor in being a member. A non-club man, the owner of a 12 to 24 horsepower motor car, with which he expects to run 10,000 kilometers per year, would pay as follows: Garage per year, \$72; insurance upon \$8,000 per year, \$59; 3,170 pints of gasoline, \$150; two pairs of tires, complete, \$169; 330 pounds of lubricant, \$45; total, \$495.

## DANGEROUS HABIT ENDS

### Leaving Automobiles In the Street With Engines Running Stopped By Law At Cleveland

Cleveland, O., March 28.—It is getting to be quite a dangerous practice to leave automobiles standing at the curb in a large city. This is particularly true in Cleveland, where there are a number of factories and where the interest in the game is becoming almost universal. A handsome automobile standing near the curb always attracts attention in Cleveland. There are always those who are curious to know how the machine works and occasionally people who think they know all about it cause trouble. This fact was demonstrated in two instances recently and in both cases the machines were injured and the owners had no recourse. However, both of these incidents have resulted in legislation which may tend to correct some of the troubles liable to happen to unprotected machines.

An amendment to the automobile ordinance now in force in Cleveland makes it a crime punishable by a fine to leave the motor of an unattended automobile in operation while standing on the street. In other words the owner must shut down his motor if there is no one in the machine. This ruling resulted from an accident which occurred in the downtown section of the city recently. A club man jumped out of his car and ran into a store, leaving the motor running. The machine at once attracted a crowd and a Mr. Knowlton, who wanted to show a friend how a clutch worked, threw on a lever and the machine started down the street on rushing business. It brought up against a lamp post some-what the worse for wear. Nothing could be done to the inquisitive meddler, but a councilman who heard of the incident promptly introduced the measure mentioned and even Mayor Tom L. Johnson, who is a strong champion of the rights of automobilists, did not oppose the amendment.

The other case was somewhat amusing to all but the automobile owner. A few days ago a club member drove up in front of the Hollenden hotel to take lunch at the automobile club. A chauffeur from a neighboring garage happened along and the club man asked the man to guard the machine while he had lunch. A few minutes later a couple of gentlemen came out of the Hollenden and proposed to the man in charge that he take them in a hurry to the railway station in the east end. The man demurred, but an offer of a five spot was more than he could withstand. He figured that the club man would not be out for an hour or so and that by that time he could be at his post, \$5 the richer, and no one the wiser. He made the run all right, but on the return trip while ruminating on how he would spend the easy money he failed to negotiate a turn in a street and landed against a tree, the machine much the worse for wear. The penitent went back to the club rooms and explained the situation like a man, but the wrathful club member was not appeased with an offer of the five and straightway had the man arrested for stealing the machine. They had him up in police court, but although the police prosecutors searched the law most thoroughly they could not find anything to fit the case, because it developed that the man

had been placed in charge of the machine and that, anyway, he had no intention of keeping it; in fact, was on the way back when the accident happened. The police prosecutors vowed they would have a law ready for the next man who drove off in an automobile without the owner's consent, so a bill will be introduced before the legislature which will tend to discourage extemporaneous chaffing with other people's automobiles, as it will provide a fine ranging from \$100 to \$500 and 6 months in the workhouse.

#### MAY DISCIPLINE OLDFIELD

New York, March 29.—There was to have been an informal meeting of the local members of the A. A. A. racing board today, but an engagement of Chairman Pardington has compelled its postponement until tomorrow or perhaps an even later day this week.

Chairman Pardington said this morning that the revision of the rules has not been completed and that nothing beyond desultory discussion of various topics is intended at the informal meeting. He says he has the views of the members of the committee from other cities by mail on the matters to be considered so that their attendance will not be necessary before the formal meeting of the board.

One of the most serious matters to be brought before the members for discussion and action by Chairman Pardington, and he says it will most certainly be brought before the board, is Barney Oldfield's recent persistent riding at unsanctioned meets in the south this winter and his alleged open words of defiance to the chairman, the board and the association in the matter of obtaining sanction for his exhibition rides and match races.

Should the board resolve to discipline Oldfield the punishment would naturally take the form of suspension. This would interfere with his proposed official try for the records at Ormond in April and his participation in the early spring meets.

#### SCHEME PROVED POPULAR

Cleveland, O., March 28.—The rooms of the Cleveland Automobile Club in the Hollenden hotel have proven so pleasing to the members and their friends that another room has been added to the suite. As heretofore outlined in these columns the club some time ago leased two rooms adjoining the grill room in the Hollenden. These were fitted up in magnificent shape by the hotel and are maintained by it, so that there is no trouble to the members or house committee. Recently the members felt the demand for a private dining room, so a small room adjoining the main room has been fitted up in "rathskeller" fashion for the exclusive use of members. Saturday evening the members held a staid party and smoker. Each member was required to bring with him a stein for ornamenting the room and the use of the members and forty-ey flags were thus collected. They ranged in capacity from a pint and a half to four and a half pints, a monster of the latter size being contributed by George Collier. Toasts were responded to by the various members. The new club rooms induced many new members and the organization is in a most thriving condition.

#### WHEN HE IS A VICTIM

This is the season when the motorist falls a victim to the street knirk with the "latest map of the city and surrounding country."

# POSTAL SERVICE IN MADAGASCAR

An automobile postal service under the French government supervision on the island of Madagascar, Africa, was started June 1, 1903. The length of the route, which runs from Mahatara to Tananarive, is 135 miles, with grades as high as 9 per cent.

Enormous difficulties had to be overcome, the principal one being the making of the road to be used for the service. It was impossible to get anything like a straight course, even for a few miles, inasmuch as the country is mountainous and presents many very sharp turns. Yet, notwithstanding these natural difficulties, it is claimed that the French engineers did remarkably well and that this road may be taken as an example of what can be done by persevering men even in places where road making is uncommonly difficult.

Another difficulty that had to be met was the gathering of reliable men for the service and for the repair shops. It would have been expensive and difficult to send to France for



DEPARTURE FROM TANANARIVE

a full force of men, and consequently most of the workmen and drivers were taken from among the regular troops, especially from the artillery regiment, these men having more mechanical knowledge than the other soldiers and thus were better fitted for the work. The prospective drivers were put to work in the shops, first taking apart and rebuilding cars, and then doing regular repair-work. In this way they were able to learn the construction and mechanism of the vehicles which they would have to drive later on. Several times each week European experts give technical lectures and practical demonstrations. As soon as the men become familiar with the motor vehicles they are taken out in company with a competent driver and are taught to handle the car. After not less than 8 months of such practice, a final examination is held and the prospective driver is given a permit to drive alone, and becomes a fully qualified

member of the staff as soon as he has demonstrated his ability satisfactorily.

The service has eight covered mail cars, six of which are of 15 horsepower and two of 12 horsepower. All the cars are Panhard and are rather old-fashioned models. But they are strongly built, which is the chief requirement in service on the roads of the island.

Four of the cars are used for service between Mahatara and Beforona, which is located half way between Mahatara and Tananarive, while the others cover the Beforona-Tananarive section of the road. Neither the government officials nor the natives care for service at great speed, but they desire an average running time to be maintained, so that the mails may be carried on a schedule time every day. At first the weight of the letter mail and packages carried amounted to about 2,200 pounds a trip, but it now reaches nearly 7,000 pounds, which has made it necessary to order six additional cars.



ARRIVAL OF THE MAIL



MADAGASCAR VILLAGE STREET

## METROPOLITAN GARAGE GOSSIP

The great Buftam 90-horsepower racer is now at the Central Automobile Co.'s shop, being overhauled and tuned up. Mr. Kimball says there is some trouble with the carburation, which is defective and will be remedied. One of the company's employees says he had the car out on the Coney Island boulevard early one morning and that it was timed between mile posts in not far from 42 seconds, with but six of the cylinders working. The racer has eight opposed cylinders, with four carburetors. The drive is direct. A large clutch is released by a hand lever. The wheel base is 120 inches; the length over all, 13 feet, and the weight 2,300 pounds. The car is very low built, clearing the ground by but 6 inches. It is said the racer will be given straightaway trials, entered in track races and be offered the A. C. A. racing committee for the international cup contest in the event of the failure of one or more of the present candidates to make good. It will be known as the Central Greyhound.

Mr. Hollenden, of Hollenden & Tangeman, returned on the St. Louis from his flying trip to the factory at Turin to secure larger shipments to meet the demand for Fiats. As a result of his mission the Citta di Milano brought an extra consignment of 16-20 and 24-30 horsepower cars.

The agency for the Crest has been given to Walker & Dam. The newly organized firm, made up of Charles P. Walker and Andrew C. Dam, has leased a finely appointed, two-story brown stone front garage at 20 West Sixtieth street, for sales headquarters. A

general storage business will also be conducted. A complete repair shop is a part of the plant. The first of the 1904 Crests was received on Saturday.

The Banker Bros. Co. received two carloads of Pierce cars last week and expect two more carloads this week to meet the big demand for these cars brought about by their successes in the Pittsburgh endurance run.

M. A. Cornell & Co., who have taken the agency for the Cameros cars, made by United Motor Corporation, of Pawtucket, R. I., in which the Brown-Sharpe people are said to be interested, have received the first of the runabouts. Mr. Cornell says he has booked twelve orders from fifty-four inquiries made.

A new delivery wagon is being shown by the Buckmobile Co.

F. A. La Roche and A. L. Picard were at Washington last week, looking after their exhibit at the show. Shipments of Darracs were made to Detroit and Memphis last week.

F. E. Moscovics will start next month on a tour from this city to St. Louis by way of Buffalo and Chicago to a Clement car fitted with Continental tires. The journey will be a leisurely one in the interests of the Sidney P. Bowman Automobile Co. and the Continental Caoutchouc Rubber Co., importers of the car and tire.

Peter Fogarty, a former member of the New York Garage Co., is fitting up a handsome garage at 142 West Thirty-eighth street and has taken the agency for the Northerns.

He received his first machines and begun business on Tuesday.

Five Peerless cars were sold by the Banker Bros. Co. last week.

The Ansonia Motor Car Co., in which Manager Armstrong and Mr. Scott, of the Electric Vehicle Co. branch, are interested, is doing a big business in slightly used and shop worn cars of popular makes and of all three motive powers.

The Phelps Motor Vehicle Co., of Stoneham, Mass., is to open a branch at 154 West Thirty-eighth street, where the Crest agency was recently located. Mr. Phelps, a brother of the president of the company, will be in charge.

President Babcock, of the Buffalo Electric Vehicle Co., and senior member of the firm of Babcock, Atwood & Bowen, has returned from California and was at the garage last week.

Manager Davis, of the Knox branch, received his first 20-horsepower car Friday and was at once rushed with demonstrations.

The American De Dietrich Automobile Co. has taken the garage opposite the Waldorf-Astoria, where the Auto Importing Co. was formerly located.

E. J. Willis, the local agent of the Waltham Mfg. Co., reports a big rush for Orient buckboards. Owners of big automobile stables, he says, are buying them for knockabout, depot and errand service. The theatrical colony has taken to them, too. Kyle Bellow, the matinee hero; the Laufman troupe of trick riders, and Prelio, the ventriloquist, are among recent buyers of them.



# Motor Car Family

Trees + + + +

No. 2 - The Haynes-Apperson.

1903 Runabout  
1901 Surrey  
1901 Runabout  
1902 Runabout  
1901 Surrey  
1903 Tonneau  
1900 Surrey  
1893 - The Patriarch  
1904 Touring Car



## HONOR AUTOMOBILISTS

### Transportation Club Is Host—Motorists and Newspaper Men at Its Banquet—Depew's Address

Automobilists were the guests of honor at the eighth annual dinner of the Transportation Club at the Manhattan hotel, New York, Tuesday evening of last week. Most of the members of the club are railroad men and much good natured chaffing was indulged in between the representatives of the two moles of transportation.

Senator Chauncey M. Depew, president, with James B. Dill at his right and Winthrop E. Scarritt, president of the Automobile Club of America, at his left. Other guests were Colonel Albert A. Pope, Lewis D. Parker, Alfred Reeves, August Sinclair, E. E. Schwartzkopf, Henry Sanderson, H. M. Swetland, L. R. Smith, F. E. Spooner, E. R. Thomas, J. Brisbane Walker, John C. Wetmore, Windsor T. White, M. J. Budlong, A. G. Hatchelder, R. O. Betts, F. C. Billings, E. H. Cutler, Charles Clifton, Henry C. Cryder, Charles E. Duryea, S. T. Davis, Jr., W. D. Gush, A. L. Garford, E. G. Tiellaher, J. H. Gerrie, John A. Hill, Arthur Harrison, W. H. Harrison, Colonel E. B. Hay, Arthur N. Jervis, L. H. Kittredge, F. A. La Roche, R. McA. Lloyd, J. B. MacDonald and Percy Owen.

Senator Depew pointed out how harmony could be achieved and said the world was for speed with safety and so was the club. The senator said that his first experience with an automobile was 2 years ago when a friend in London took him for a ride, violating the speed laws and rousing the nerves of his guest. The senator closed his address by saying:

The greatest enemy of the automobile has been the foot automobilists. There ought to be a special asylum where these dangerous creatures could be locked up for life. Automobiling in France and many parts of Switzerland is the delight of the tourist because of the excellence of the roads, the freedom of both rest and movement and the fact that there is so little travel on the highways.

I met an American automobilist who was narrating at a Swiss hotel with garage give the horses he had frightened by going directly at them and showing his skill by swerving at the last second. I think this one fool automobilist caused laws to be passed in one canton prohibiting automobiles entirely within that territory and his fellows have been the authors of the protective legislation now so seriously handicapping the expert and intelligent chauffeur.

We are now upon the eve of a revolution in both passenger and freight transportation by the automobile. The passenger mobile is to come constantly into greater use in large cities and profitable employment in villages where it will not pay to construct and operate trolley lines. Rural free delivery of mails is one of the growing necessities of our postoffice system. It is not a dream to suppose that an automobile constructed to carry mail, passengers and parcels will pay handsomely and while bringing the farmer in daily contact with the postoffice will connect his family with the store and his farm with the village market.

These facilities will contribute by stimulating travel and production to the revenues of the railroads and to the trolleys in the larger towns from the highways and byways tributary to the central village or city, and thus not only will farms become more valuable and the vast volume of our internal traffic be greatly added to, but there will also be increased comfort and pleasure in country living. The automobile that is and is to be will stimulate that most beneficent of public works, good roads everywhere.

Mr. Scarritt, in his address, predicted that the automobile would become a great com-

mercial vehicle, far beyond the expectations of the most sanguine at the present time. He said:

It would mean millions to this city if its streets were widened. The automobile takes up half the space occupied by the horse vehicle. It therefore will double the capacity of our streets, will make them cleaner and carry twice the load. Along that line alone is to be found the solution of our congested traffic and the day will come when the horse, that noble animal, will go longer to be a beast of burden. The day of his emancipation is at hand.

Mr. Dill, who was introduced as "the most eminent socialist in America," said in part:

Let no man assume that to travel from New York to Boston by automobile means a disregard of railroad fares. But a few days ago—turning to Senator Depew—having a nodding acquaintance with a gentleman in your department at the Grand Central station who dispenses mileage books for a consideration to the road, I handed him \$20 and asked for a mileage book.

The gentleman said: "Mr. Dill, how far are you going?" I said, "To Northampton, Mass." Said he, "Had you not better buy two books?" and he said, "To travel less than 400 miles?" "Oh," he said, "excuse me, I thought you were going with your machine."

The gentleman in the ticket office knew that for an ordinary trip to Northampton to the ordinary man in an automobile a thousand-mile book was insufficient to cover what might be called the railroad transportation concomitant to an automobile trip.

It is another means of increasing the mobility, that great characteristic of Americans to go from place to place, and whether it be by the horse, by the automobile or by the flying machine, it means that when and where the man goes the family follows: it means that when the automobilist travels his baggage must come after him; it means that when the automobilist penetrates the innermost recesses of the country the comforts of life and living, food supplies, machinery, servants, families, all move with him, and in that movement they fall back on the common method of transportation, the railroad or the steamship.

### LOCAL RESTRICTION BARRED

The final draft of the Hill automobile bill was agreed on last week by Senator Aldie, representing the subcommittee of the New York senate committee on roads and bridges on the one side, and representatives of automobile clubs and of manufacturers on the other.

The bill, in its present form, is a compromise between allowing localities to fix speed rates and having the state fix them absolutely. The bill, with the amendments agreed upon, provides for the state a speed limit of 20 miles an hour in the open country and 15 miles in thinly settled portions of cities and villages. These limits are subject to certain changes by the adoption of ordinances in cities and villages, after the passage of the act.

Cities may pass ordinances fixing speed limits contrary to those in the act, providing that such ordinance rates are not less for automobiles than for other vehicles. Villages may pass similar ordinances, with the additional restriction that the minimum speed limit shall not be less than 10 miles an hour.

Cities and villages passing such ordinances must post signs on every highway at city and village limits and at other points where the rate is reduced, indicating the speed allowed. They must also fix penalties for the violation of such ordinances, which penalties cannot be greater for automobilists than the penalties for violations by the owners of other vehicles. Where ordinances are not adopted by cities or villages, the act itself will control the situation. With the changes made and the bill reported, its passage is assured.

## LITTLE STATE—BIG BILL

### Rhode Island House Puts Speed Limit at 8 Miles—Motorists in Arms—Trade Outlook Bright

Providence, R. I., March 26—The Rhode Island house of representatives passed an automobile bill this week, but it was a far different document than the one that was prepared by the men who had it in charge. The original bill provided for a maximum speed of 15 miles an hour, but in the house it was first reduced to 10 miles an hour and later an amendment was added which made it as low as 8 miles. Another amendment allows towns to prohibit the use of automobiles on certain roads, and in other ways the bill was cut up to pieces. As it was when presented it was not agreeable to automobilists, and it is expected now that every effort will be made to defeat the measure in the senate if it ever comes before that body. The rough handling the bill received should not be taken as an expression of opinion of the state on automobile legislation as there was any amount of politics in the proposing and passing of amendments. At the present time the state has no automobile law.

The prospects for the automobile trade in this city for the coming season, according to the dealers and agents, are of the best, and already many of the cars which have been ordered during the winter have been delivered. At least one new garage will be in operation, making a total of six in various parts of the city. There are one or two changes in the local trade this year which are of more than ordinary interest. Last year H. B. Shattuck & Son, a firm which had stores and garages in Boston and Lowell, as well as in Providence, and which was obliged to suspend, had an excellent garage just opposite the Union station. When the big firm went to the wall the garage was deserted, and it has been taken this year by the Davis Automobile Co., which handles the Winton, Knox, Oldsmobile, Locomobile and the Haynes-Apperson. The Davis company will run this place in addition to its Mathewson street garage, which it had last year.

An entirely new garage is to open soon on Richmond street in a good location, not far from the headquarters of the Rhode Island Automobile Club. It will be managed by the Rhode Island Motor Car Co., which has taken the local agency for the Franklin and Northern cars, which make their appearance in Rhode Island this year for the first time. At the present time the dealers around the city are making deliveries at the rate of about six or seven a week, and if it were not for the fact that some of the consignments of cars which have been sent from the factories have gone astray on the road this number would be much larger.

The Rhode Island Automobile Club has passed resolutions in favor of a park commission for the state which will be given the permission, if the body is created, to build parks and boulevards throughout the state. The automobile club was anxious to put itself on record in approving this plan on account of the great benefit it will be to automobilists, and also to hundreds who pass through Rhode Island during the summer months on their way to resorts along the north shore of Massachusetts and to the many resorts in the

White mountain district of New Hampshire.

The third automobile school in the country was opened at the Y. M. C. A. in this city this week and has started with a large number of classes and also with many members in each class. The courses that are given are identical with those presented at Boston, and full instruction in gasoline, steam and electric machines will be given by the same instructors as at Boston. Lectures will be given on Tuesday and Friday evenings and practical work in the various garages will be carried on by appointment. All of the agents and dealers in the city are on the executive committee, which has charge of the management of the school, and they have placed their garages at the disposal of the instructors.

Many of the local dealers report that the Boston show has added to their business in this city to a great extent, and almost every agent in Providence attended the show every day of the week that it was in progress. Leo F. N. Baldwin, of the Central Automobile Exchange, says that he sold a large number of Stanleys, and the Knox and Pope agents say that they did a rushing business.

#### RACES AT HAMDEN PARK

Springfield, Mass., March 28—Races will be held at Hampden park by the Springfield Automobile Club Memorial day. Plans have progressed so far that the track has been engaged, with permission to put the track in condition for automobile racing. This will involve considerable expense in banking the turns. It is likely that the track will be engaged for the season and several meetings held. Owing to the lateness with which the meeting for Memorial day has been taken up no attempt will be made to get the big races for the opening event. It is believed, however, that some interesting matches can be arranged with home talent, as there are a number of fast cars owned in the club.

Something will be done this season, the officers of the club say, toward establishing permanent city quarters for the club. It is the ambition of the club owners to have, not only rooms for social needs, but garage quarters as well. A suggestion has been made that a building be erected in the rear of the Whitney rink for the club's use. Owner Whitney is said to be willing to tear down old buildings on the lot which measures 50 by 100 feet. If such a building is erected A. A. Grisel has stated his willingness to take it and move his garage there, leasing to the club the larger part of the club rooms, located above. Such a structure would be planned with reference to the club's needs and would therefore be most suitable. Another plan is to secure rooms in a building already erected, without consideration of needs incident to a modern garage.

Dr. W. R. Weiser and Harry Knox will attempt the run to St. Louis with the A. A. They will likely leave with the section that is to move July 25 or 26, and due to arrive in St. Louis August 10.

#### TO SELL SEARCHMONT

The trustees of the Searchmont Automobile Co. have filed a petition for leave to sell at public sale the real estate of the bankrupts situated at Trainer, Pa., together with the buildings and the machinery. A meeting for the consideration of the petition will be held at room 6, Postoffice building, Philadelphia, Pa., April 12 at 3 o'clock in the afternoon.

## SHOW A HELP TO TRADE

### Capital Dealers Busy As Result of Exhibition — New Sight-Seeing Company — Trade Doings

Washington, D. C., March 26—By long odds the best automobile show Washington has ever had, both in point of quantity and quality of exhibits, amount of business transacted and general interest aroused, came to an end this evening after a week's run. Barring the opening night, when a heavy downpour of rain served to keep the attendance down to the minimum, the number of visitors each night was large enough to comfortably fill the armory. Wednesday night was designated diplomatic night, when many representatives of foreign governments were present to view the latest developments in automobile construction. The following night was congressional night and large numbers of the nation's legislators mingled with the throng and talked automobiles with a degree of familiarity with the subject that was amazing. All the dealers commented on the fact that the visitors displayed such general knowledge of automobile construction and this is regarded as a sign of the times. There is no question that the show will have an important effect on trade during the next few weeks, for every exhibitor obtained numerous "prospects" and these can be handled with a little persuasion.

The most important event of the week in local trade circles was the sale of a large garage now being built on Fourteenth street to the National Capital Automobile Co. This building, which has been described in a former issue of MOTOR AGE, was originally planned for the Mutual Automobile & Storage Co., but a hitch occurred in the negotiations and Manager John Wood stepped in and secured the garage for the use of his company. The building has a frontage of 50 feet on Fourteenth street and a depth of 136 feet. It is of fireproof construction throughout and will be three stories in height. The price paid for the property was \$36,000. Some minor changes have been made to the original plans, but they will not delay the completion of the building. It is the expectation of Manager Wood to have the garage in shape by May 1.

It is understood that the American Mfg. Co. is looking for a site in or near Alexandria, Va., just across the river from Washington, on which to locate its plant for the manufacture of automobiles, motor boats and gasoline engines. This company was incorporated here some weeks ago with a capital stock of \$1,000,000, and it will have its principal office in this city.

A. L. Cline & Co., who have maintained an office on F street for some time, have leased for a term of years the fine garage at 1026 Connecticut avenue. The most modern appliances for the proper care and attention of storage batteries of all types have been installed and skilled men have been placed in charge of the different departments. This firm has secured the agency for the Baker electric, which they will handle in addition to the Rambler gasoline car.

A. L. Kull & Co. have succeeded to the business on the Edison Automobile Station, on Thirteenth street. They will handle the Ford car and probably one or two other makes. It is understood that W. Leslie Edison will open a garage at 1028 Connecticut avenue within

the next 10 days. Later on it is probable that a line of automobiles may be handled.

Among the visitors to Washington during show week were F. A. LaRoche, J. F. Herman, the Oldsmobile agent at Norfolk and Richmond, and T. B. Jenkins, the Oldsmobile agent at Sumter, S. C.

That Washington is recognized as a fine field for "sight-seeing" automobile services is evident from the fact that there are now three companies catering to this trade here. Two of these services were described in a recent issue of MOTOR AGE. The latest is the Auto Transit Co., which has just been incorporated to operate sight-seeing cars and a regular auto transit service. The capital stock is \$150,000 and the company is officered by the following: Thomas C. Noyes, president; W. E. Schneider, vice president; E. A. Beckman, secretary and general manager. These gentlemen, with W. C. Bryan and F. T. Howe, constitute the board of directors. At the present time the company has one car in service and it is one of the largest of its kind in the world. It was built by the Vehiele Equipment Co., and is in the form of an automobile bus, its total weight being 9,810 pounds. The car is 11 feet 4 inches in height and 21 feet long, having a seating capacity for 40 people. The seats are reached by means of ladders, which are detachable and are carried in a locker in the rear of the machine when they are not in use.

This car makes two trips each day around Washington at the rate of \$1 per passenger. In the near future, in fact, as soon as the cars are completed, this company will operate on a regular schedule at 5 cent fares a line of cars running from Sixteenth and U streets to the pension office, covering one of the most profitable routes in the city.

#### DENVER CLUB IS GROWING

Denver, Colo., March 26—The Colorado Automobile Club now has a membership of 200, while the number of automobiles in Denver is over 400. In the state of Colorado there are at present about 550 automobiles. The club was organized in May, 1902, with thirty members. During the past year it has held a number of events that have contributed to the popularity of the automobile and at the same time has resulted in an increase in the club membership. The endurance run from Denver to Palmer lake on Decoration day was eminently successful, the annual automobile day, on September 25, added fresh laurels and the Barney Oldfield meet was crowned with success. The club has given three lectures on subjects pertaining to automobiles and two more will be given this spring. On April 28 D. W. Bruntton will lecture on "The Four-Cycle Gasoline Engine," and at the May meeting there will be a lecture on carburetors, the author of which has not yet been selected.

It is the intention of the club to increase the interest in automobilism by having a number of runs this summer. Most of these will be around Denver, but there will be one tour which will take a week of continuous riding. A map of Denver and vicinity has been compiled for the use of the members of the club, and it is the purpose of the club to compile another map which will take in the entire state. This map will include such matters as surfacing of roads and general conditions, telling where supplies can be had throughout the state.

## BUY SECOND HAND CARS

### Some Clevelandites Make a Specialty of This Line in Preference To Handling New Goods

Cleveland, O., March 28.—The Chisholm & Phillips Automobile Co., which has been figuring on erecting a fine garage on the east end, may change its plans, as it has made a proposition to the courts to buy up the lease of the defunct Cleveland Automobile & Supply Co. on the Vincent street garage, now occupied by the receiver for that company. The location would be excellent, as it is in the very heart of the business district and within a few steps of the Hollenden hotel and the Cleveland Automobile Club. The proposition is still under consideration.

Frank R. Blackmore and Ed L. Streibinger, who were formerly famous as amateur bicycle racing men, have taken a long time lease on a building at 475 and 474 East Prospect street, where they will carry on the repair business heretofore conducted by Mr. Blackmore in an adjoining store. In addition they will handle new and second-hand cars and make a specialty of storing cars. The location is in the east end residence district on the direct route for automobilists who frequent the parks and boulevards. The building will be remodeled and all appliances for salesroom, garage and repair shop will be provided.

The number of men handling second-hand automobiles is increasing at an astonishing rate. Aside from stores which make a specialty of this class of business, there are getting to be a number of middlemen who have no stock but who make a business of bringing customers to the dealers, charging a commission for making the deal. On the whole it is quite a profitable business and just at present it appears as though more second-hand cars are being sold than new stock. At the Cleveland show a month ago the new sales were most pleasing, but since then the weather has been unfavorable and the sales of new cars has been somewhat disappointing to some of the dealers. The business is in sight but the buyers have been backward. In the meantime these cappers for second-hand cars have been extremely busy and have succeeded in inducing a number of prospective buyers to take up second-hand cars in preference to new ones. Some of the smaller dealers say they prefer the second-hand business to the new. The 20 or 25 per cent on a new car sounds large, but after figuring freight, overhead expenses, demonstrating and small repairs for weeks after the car has been sold, the profits are sadly depleted. The second-hand man does business in a cheaper establishment, has no freight bills to pay and has no liability in the car after it has been demonstrated as being in good order and accepted. And frequently if a car presents a good appearance and runs satisfactorily it commands almost as good a price as a new car.

Second-hand dealers say that the major portion of this class of business is in the lighter class of cars. The sellers are those who have used their light car for a season and have decided they want a larger car, while the buyers are usually those who cannot afford a high priced car, or who have decided to try the game with a cheap machine and con-

template buying a better one if they are pleased with the results. A dealer states that he could dispose of almost any number of Olds and other cars of similar class at from \$400 to \$550 if he could obtain them fast enough. Many cars are sold at even a smaller price and do not wait long for purchasers. The sale of second hand large cars is much slower.

### SOUTH MAY MAKE MACHINES

Nashville, Tenn., March 25.—Nashville, the foremost motor vehicle city of the middle south, may soon have an automobile factory. The Nashville Automobile Co., a corporation which has been selling and repairing automobiles in this city for about a year, will soon commence to assemble five machines especially adapted to the needs of automobilists in this city and the surrounding country.

These five machines will be used by five of the directors of the company and will be in the nature of experimental machines. If they prove successful the company expects to go extensively into the manufacturing of automobiles next year.

The idea of building a special machine grew out of the fact that it has been difficult for Nashville enthusiasts to get machines, at any price, which were suited to the peculiar conditions in Nashville. The roughness of some of the roads and the very steep grades on some of the hills make a strong, large-powered, low-geared machine desirable.

Such machines the company plans to assemble this year and to build next year. They will be fitted with engines capable of developing 24 horsepower, and geared so that, at top speed, the cars will not make much better than 25 miles an hour. They will have three speeds ahead and will be fitted with a tonneau, capable of holding five passengers.

It is thought that there will be a considerable demand for a machine such as the company plans to build, especially through this section of the south. If the company, which is backed by some of the most prominent capitalists of the city, builds automobiles, it will be the first concern in the south to do so.

### COUNT 454 INFRINGEMENTS

The demand for automobiles the coming season will be about one-third more than last year according to the conclusion of the Association of Licensed Automobile Manufacturers at its monthly meeting last week. The plans submitted by the various makers showed that they are ready to care for an increase of 50 per cent over the business of last year. The licensed output this year will be about 17,000 cars.

Since January 1, 1903, eighty-seven unlicensed automobile concerns have gone out of business through failure and other causes. There has been only one member of the association who has failed in the same period.

The patent and mechanical expert who examined the 1904 models of the unlicensed manufacturers at the shows reported that, in his opinion, there were 454 infringements of the vital patents controlled by the organization, and these are distributed so that practically every unlicensed maker is an offender.

Charles A. Wardle was appointed to do the outside work of visiting the agents and manufacturers, thus enabling Manager George H. Day to give more time to his office work. There were twenty-three of the twenty-seven members present at the association's meeting.

## NINETEEN TO COMPETE

### List of Entrants for the Automobile Club of America's Commercial Service Test Next Week

Altogether nineteen entries have been received by the Automobile Club of America for the service test of commercial automobiles to be run in New York April 4 to 9, including entries by classes are:

FIRST CLASS—TO CARRY 1,000 POUNDS OR UNDER.  
Knox Automobile Co., Springfield, Mass., gasoline delivery wagon.

Olds Motor Works, Detroit, Mich., gasoline delivery wagon.

Olds Motor Works, Detroit, Mich., gasoline delivery wagon.

SECOND CLASS—TO CARRY 1,000 TO 2,000 POUNDS.  
Commercial Motor Co., Jersey City, N. J., steam delivery wagon.

Charles Rockliff, Brooklyn, N. Y., gasoline delivery wagon.

Lansdon Motor Car Co., New York, electric express wagon.

Cantano Electric Tractor Co., New York, electric delivery wagon.

Carlson Motor Vehicle Co., Brooklyn, N. Y., gasoline delivery wagon.

Knox Automobile Co., Springfield, Mass., gasoline delivery wagon.

Pope Motor Car Co., Indianapolis, Ind., electric delivery wagon.

Electric Vehicle Co., Hartford, Conn., electric wagon.

Pope Motor Car Co., Indianapolis, Ind., electric delivery wagon.

THIRD CLASS—TO CARRY 2,000 TO 3,000 POUNDS.  
Knox Automobile Co., Springfield, Mass., gasoline delivery wagon.

Consolidated Motor Co., New York, gasoline wagon.

FOURTH CLASS—TO CARRY 3,000 TO 4,000 POUNDS.  
Union Motor Truck Co., Philadelphia, Pa., gasoline stake truck.

FIFTH CLASS—TO CARRY 4,000 TO 5,000 POUNDS.  
Electric Vehicle Co., Hartford, Conn., electric truck.

SIXTH CLASS—TO CARRY 5,000 TO 6,000 POUNDS.  
Arthur Herschmann, Brooklyn, N. Y., steam truck.

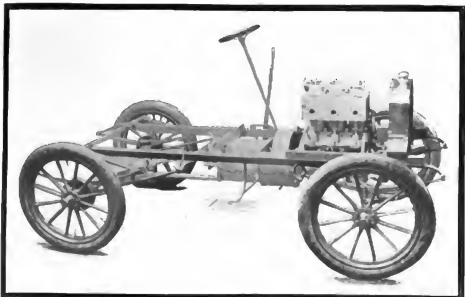
SEVENTH CLASS—TO CARRY 6,000 TO 8,000 POUNDS.  
No entries received.

EIGHTH CLASS—8,000 TO 10,000 POUNDS.  
Fisher Motor Vehicle Co., Hoboken, N. J., gasoline electric truck.

Commercial Motor Co., Jersey City, N. J., steam truck.

### CHICAGO TRADE MOVES

Chicago, March 29.—The Automobile Supply Co., which is the successor of the P. J. Dasey Co., will remove May 1 from its present quarters at 19 La Salle street to a more commodious store at 1339 Michigan avenue, in the center of the Michigan boulevard automobile colony. This move contemplates a considerable increase in the stock carried, both in parts and accessories. The company has recently added several new lines and now in addition to handling a full line of general goods is the western representative of a number of lines of well known parts and specialties. The company represents the Dow Portable Electric Co., spark coils and plugs; Carl E. L. Lipman, circulating pumps; Milwaukee Motor & Mfg. Co., horizontal motors; Dayton Elec-



CHASSIS OF ST. LOUIS CAR

pump driving gear is enclosed in the crank case and in mesh with the larger valve gear, thus reducing noise and housing the gear and securing the benefits of the oil bath. The flange carrying the pump is readily removable, the driving gear coming with it. Thus every gear of the engine, and, in fact, every gear of the machine is enclosed and runs in oil. The radiator is of the Brasco cellular pattern, placed across the front of the car and provided with fan at the rear.

The driving clutch operates on the toggle joint principle, and is actuated by a clutch cone which clamps the two faces of the clutch against the driving member of the fly wheel. This clutch is said to provide a smooth, steady action and to relieve the gears of jerk. The gear box is bolted directly to the motor crank case through the medium of the steel housing and the rear crank head, thus making the motor and transmission substantially integral or self-contained, and obviating the necessity of universal joints between the clutch and transmission, as well as housing the under part of the fly wheel from the splash of the road wheels. This arrangement also makes it possible to dispense with a secondary frame, thereby simplifying the machine and reducing the weight.

The gear box contains a three-speed shifting pinion transmission with direct drive on the high gear, all changes being accomplished by a single lever at side of car. The face of the gears is  $\frac{1}{8}$  of an inch, while No. 6 pitch teeth are employed. The rear end of the driving shaft carries a brake pulley which is the first member of the universal joint. This brake is operated by the forward movement of the hand lever, while the rear movement of this same lever applies the clutch. Thus the power and brake cannot be applied at the same time. The bearings of the transmission are of phosphor bronze, all of liberal dimensions, and provided with ring oil pockets to assist lubrication. The lower, or camshaft bearings, being blind at each end, the oil may be carried above the lower shaft without leakage, and thus a liberal supply can be carried, and frequent inspection made unnecessary. The transmission is also provided with an automatic system of locking the gears so that they cannot be shifted until the clutch is released. The differential is of the spur gear style and carries a sixty-nine-tooth, No. 4 pitch bevel

gear, while the pinion is of thirteen tooth, having a No. 4 pitch.

The rear axle is built up from steel castings with steel tubes carrying the differential and driving axle. These axles, as well as the driving pinion, are all carried on roller bearings, which, being of the conical pattern, serve both as thrust and roller bearings. The rear hubs are fitted with brake drums, carrying internal, double acting, wood brake shoes, which are operated by a single foot lever and cable, securing equal pull on both brakes.

The front axle is built up of drop forgings and has spindles fitted with Timken hubs and roller bearings, while the wheels are of hickory and shod with 32 by 3½-inch clincher tires. The steering gear is of the rack and pinion type, the steering wheel of which makes two complete turns from one extreme of wheel action to the other, thus rendering the steering easy. The body is of approved tonneau pattern with rolled edge, tufted leather upholstery, and

divided front seat. The tonneau is provided with a middle seat, thus giving seating capacity for five, and is ironed for removable canopy top, provided with front glass and side curtains. The car weighs, complete, 2,000 pounds.

### VERY LARGE STEAM MACHINE

Providence, R. I., March 26—There is being constructed in this city what is to be the largest automobile in New England, which will be used entirely for pleasure and racing purposes. Gilbert M. King, a witty sportsman of Providence, who holds the state record for the mile and also for 5 miles, is the man who is to have this huge machine when it is done, and he plans to do touring and racing throughout the coming season.

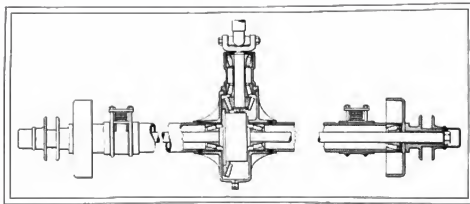
The big automobile will be driven by a steam engine of 46 horsepower, will accommodate eight people, will be capable of a speed of less than a mile a minute, and will not have a piece of wood in it. It will be constructed entirely of steel and aluminum. The wheel base is to be 120 inches, the entire length will be 13 feet 10 inches, and the weight will be about 2,300 pounds. The tank will be capable of holding 45 gallons of water, which will carry it 250 miles, a condenser being used. The boiler will be 24 inches in diameter.

### FIXED PISTON MOTOR

During the whole history of the internal combustion motor there have been continued attempts to produce motors whose principle of action shall be similar to that of what is commonly called the four-cycle motor, but which shall have more frequent impulses. There have been many freaks and many failures, but the hope of inventors is not forlorn. One of the most recent engines securing such ends and, apparently, one of the most promising, is the Tygard, the invention of James W. Tygard, of Plainfield, N. J. An experimental model of this engine was exhibited at the New York automobile show, where it attracted much attention in the west end of the gallery. This first



THE THREE-CYLINDER ST. LOUIS



MOTOR AGE

REAR AXLE OF ST. LOUIS CAR

motor is somewhat crude on account of being a remodeled de Dion-Bouton motor, but those who have seen it in operation say that it runs exceedingly well.

In this motor the usual practice is reversed. The piston is stationary, having no connecting rod and being bolted to the frame by means of studs or trunnions extending outward from its sides, while the cylinder is reciprocating. The crank case being of ordinary construction Tygard, in his adaptation of a de Dion motor, simply removed the cylinder and fitted to the old case the new cylinder and piston mechanism.

The upper or so-called cylinder portion of the motor consists of three parts—an outer casing bolted to the crank case, and containing at its lower end a slide for a cross-head; a stationary piston fitted with two rings at each end, and supported in trunnions in the center of the casing; and a long cylinder slotted on its sides in the center part, so as to be movable on the piston without interference from the trunnions of the latter.

The cylinder is made up of two pieces of steel tubing of 3/4-inch wall, lapped together at the center of the piston, and held tightly to each other and their respective cylinder heads by six rods that pass alongside of them and through the heads. A cross-head is attached to the lower end of the cylinder, and this, together with the piston, acts as a guide for it. The connecting rod of the motor is fitted to a wrist pin in the cross-head.

The motor piston, instead of being flat at each end, is cupped out and fitted with exhaust, inlet, and spark ports opening from the round center chamber or valve seat, into each of the two cylinder spaces formed respectively on opposite ends of the piston. These ports are 96 degrees apart. By them the gas enters and leaves the cylinder directly through the head, or through what corresponds to the head in an ordinary motor. The spark also occurs in this place, with the result that a quick inflammation of the gas is obtained, while the full force of the explosion is obtained directly against the piston, with a small loss of heat.

Within the center chamber of the piston is a rotary valve, that makes one revolution to every two of the motor crank shaft. This valve is a hollow shell, with ports and two central transverse partitions, that divide it into three chambers. One of these serves as an inlet and the other as an exhaust outlet, while into the middle one there extends a tube with two notches on its end, which, in conjunction with a stationary steel wire that runs over the projections and falls into the notches, forms a simple igniter. The valve is slightly tapered, and is lubricated by oil fed to it through tubes

that lead to holes in the trunnions on each side of the piston. Other oil pipes distribute oil on the sides of the piston, while the cross-head is oiled by splash lubrication from the crank case.

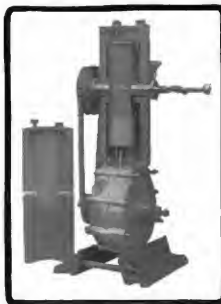
The rotary valve is turned by a Renault silent chain. It is readily removable, as is also the screwing the two nuts on the upper end of the

movable collar on the right-hand end of the piston trunnion. The coil spring is stretched sufficiently to keep the inner hooked end of the central igniter wire in contact with the notched end of its tube. The wire is insulated from the tube by fiber bushings. A small metal piece on the wire just above the two nuts has a pin projecting from it. This pin contacts with a projection on one of the two studs, which keeps the igniter wire from turning. As the notched tube containing the igniter wire turns with the valve, the wire, being held stationary, has the notches revolved against its hooked end, with the result that every time one or the other of the two notches wipes past it, a large primary-current spark ignites the charge in the proper cylinder space. The collar into which the studs are screwed is threaded on the trunnion, and by rocking it by means of the small handle, the time of the spark can be varied.

The cast-iron heads of the cylinder are U-shaped in cross section, and fit closely into the hollowed-out piston when compressing a charge. Compactness is gained by this arrangement, besides little of the cylinder wall being exposed to the hot, burning gases. The cylinder wall is perforated in the center portion, which is never off the piston, in order to aid in cooling the latter. This is accomplished by the pumping action of the rapidly-moving cylinder drawing in air and expelling it at every stroke, as well as by the suction of the air for the carburetor, which is taken from around the piston through the pipe coming out from the trunnion on the sprocket side of the casing. A pipe on the other side is for the exhaust.

The inlet pipe is connected to the center of the rotary valve on the sprocket end. The valve is of cast iron turning in a steel casing, and having 1-16-inch end play. The bore of the cylinder is 2 3/4 inches, and its stroke is 3 5/32 inches. The power of the motor is said to be 6 horsepower and the total weight at present is 120 pounds. In other words, the power of the remodeled 3-horsepower de Dion motor was about doubled, with an addition of only 20 per cent of the original weight.

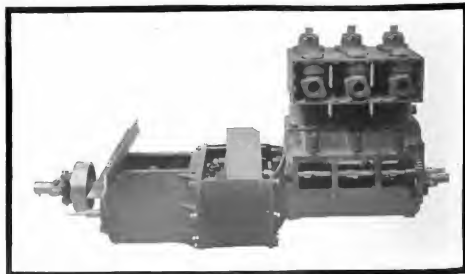
The motor operates on the regular four-cycle principle. When the expansion or impulse stroke is completed in one cylinder end, the revolution of the rotary valve has brought the exhaust port into register and the movement of the cylinder against the stationary end of the piston expels the charge, and a new cycle is commenced. A similar action being in progress in the other end of the cylinder the al-



MOTOR AGE

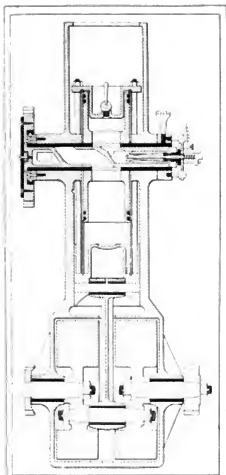
THE TYGARD MOTOR

valve stem. The central steel wire, which has its inner end bent somewhat like a fishhook, is connected through the coiled spring on it to the wire from the battery. This spring also passes through an insulated cross-piece connecting two studs, which are screwed into a



MOTOR AGE

THE ST. LOUIS MOTOR AND TRANSMISSION



ternate, work stroke action of the ordinary double opposed cylinder motor is obtained. The air cooling is practical on this size motor; while another feature is that by opening a cock in the upper cylinder head, which can be done while the motor is running, it can be run on the lower cylinder only, thus developing but half its power, and running at half its regular fuel consumption with full compression in one cylinder. The rotary valve forms a positively-actuated valve of simple construction, the wear of which will be comparatively little, as it practically runs in oil.

Mr. Tygard says that the association, the Tygard Engine Co., of Plainfield, N. J., which has been developing the motor, is now prepared to deliver 5-horsepower automobile motors, and that the firm is to be incorporated for carrying on the manufacture of the motor more extensively.

#### BENEFITS MOTOR MAKERS

Reference to the Bottell bill now in congress, providing for the removal of the internal revenue on denaturized alcohol for industrial purposes, has been made several times in *MOTOR AGE*.

The Committee of Manufacturers, with headquarters at 21 William street, New York, which is endeavoring to secure the passage of this bill, has published in booklet form several articles relative to the use of alcohol as a motor fuel. In this booklet an explanation of the bill now in congress is given as follows:

House bill 9302, introduced by Henry R. Bottell, of Illinois, now pending in congress, is intended to give the users of domestic alcohol for industrial purposes in this country the same exemption from internal revenue taxation that is granted in foreign countries. The enactment of this bill would provide an abundant supply of a safe and economical motor fuel, at a price as low as, if not

lower than, the cost of gasoline. The benefits which would result from this legislation are so manifest that its adoption should be urged by every manufacturer or user of automobiles, power launches or motor engines of any kind.

This measure has absolutely no connection with the question of the importation of foreign alcohol. It is not intended to interfere in any way with the present duty on imported alcohol. The material which it is proposed to free from the present excessive internal revenue tax is alcohol made in this country from materials grown by our farmers, which has been rendered unfit for use as a beverage. The movement is therefore in no sense partisan or political.

The chief obstacle to the enactment of this bill is the opposition of the wood alcohol interests. There are now expected to sell their inferior product at a large profit by reason of the fact that it is not taxed. These interests are antagonizing the Bottell bill on the ground that their industry will be injured by its enactment. In other words, they ask congress to continue a tax of \$2.08 per gallon of commercial alcohol on the product of corn raised by our farmers when used for industrial purposes, while allowing their product, used for exactly the same purpose, to go untaxed. It is not believed that any member of congress will assent to this extraordinary proposition of protecting one product by excessively taxing another domestic product, and if the parties interested in securing cheaper alcohol will use their influence to overcome the indifference to this subject which has hitherto characterized congress, the Bottell bill will become a law at an early date.

A special reason why the plea of the wood alcohol interests for the continuance of the tax on domestic ethyl alcohol should not be regarded, is the fact that large areas of forest are destroyed in the process of manufacturing the eight or ten million gallons of wood alcohol now used annually. There is no justification for a policy which encourages the wasteful destruction of our forests for use in producing a substance which is greatly inferior to, and much dearer than, a similar substance which can be procured in unlimited quantities from corn, potatoes and other farm products.

Extracts relative to the use of alcohol in motors are as follows:

Alcohol is not only a decidedly satisfactory substitute for gasoline as a motor fuel, but it is superior in many important particulars. It is clean, odorless and free from danger of accidental explosion. The vapor given off is not inflammable unless closely confined, and naked lights can be used around the machine with impunity. The worst danger to be apprehended from a leak in the pipe or storage tank would be the loss of the fuel, or a slow fire if a flame came into actual contact with the alcohol.

The supply is absolutely unlimited. Alcohol can be obtained from all substances containing sugar or starch, or compounds which can be transformed into sugar, such as corn, grains of all kinds, potatoes, cane and beet sugar refuse, grape skins and refuse of wine making. Increased demand can only have the effect of increasing production and stimulating efforts to perfect and cheapen processes of distillation and distribution.

In countries where it is not made artificially dear by taxation alcohol is rapidly taking the place of gasoline and other petroleum distillates, as a fuel for explosive motors of all kinds. In all leading European countries alcohol made drinkable by officially prescribed processes of denaturation is tax free.

The use of alcohol as a fuel is prevented in this country by an internal revenue tax equal to more than 3,000 per cent of its cost. Under the present tax alcohol is fifteen times as costly as gasoline at its present price. If the tax on alcohol were removed it would be as cheap as gasoline, if not cheaper, and would be the best fuel for explosive engines.

The German, French, Austrian, Russian and other European governments give every encouragement to widen the field of utility of alcohol. Alcohol exhibitions are held annually, and prizes are given for special researches increasing the knowledge of effective methods of using. Under the influence of careful supervision and scientific methods these researches have borne remarkable results.

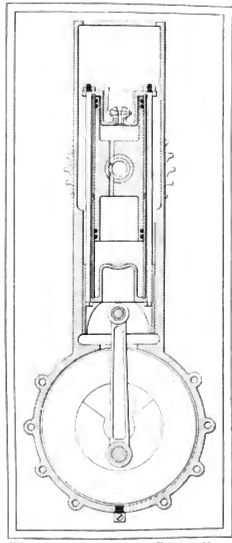
The reasons given for the higher efficiency of hydrated alcohol as a motor fuel are briefly as follows: (owing to higher compression ignition is facilitated and more perfect combustion secured.

Part of the intense heat of explosion is absorbed by the vaporized water which is converted into steam, thereby increasing the number of heat units converted into work. The temperature of the exhaust gases is also very low, and a very much smaller proportion of heat—energy—is wasted in the water jacket or exhaust. In other words, while gasoline has theoretically one and three-quarter times the thermal value of alcohol, and more than double the thermal value of hydrated alcohol, a comparatively small percentage of the heat units in gasoline can be transformed into mechanical energy, whereas a much larger percentage of the heat units in alcohol are utilized in effective work.

It is not believed that all the advantages of alcohol as a fuel have yet been demonstrated, and there is more than a reasonable prospect that further research and experiments will perfect the methods of using hydrated alcohol until a mixture with a considerably larger percentage of water than at present can be used effectively.

American experimenters are prevented from taking part in this highly interesting development by our stupid system of taxing alcohol higher than any other material, and thereby absolutely preventing its use as a motor fuel even when made suitable for drinking purposes. American automobile and other explosive motor owners have, however, had the benefits of the experiments of the great European investigators, and judging from the past experience of American inventors and manufacturers in improving on the discoveries of other countries it seems certain that with the same opportunities for securing cheap alcohol that exist in Europe they would soon excel in all the various devices for utilizing this superior motor fuel.

The advantages of alcohol as motor fuel may be summed up as follows: Freedom from danger; absence of disagreeable odors; capable of high compression; low initial heat and discharge of exhaust gases at relatively low temperature; the explosion is less sudden and more prolonged than with gasoline; more perfect ignition and combustion; the cost is lower than for other fuels.





## FROM THE FOUR WINDS



The attendance at the Crystal palace show in London this year was about 165,000.

Forty new members were received into the Chicago Automobile Club at the last directors' meeting.

William K. Vanderbilt, Jr., has probably the largest number of speed cars in the world. He owns three Mercedes, three Renaults, one Mors, and three American cars.

The affairs of the Morlock Automobile Mfg. Co., of Buffalo, N. Y., will be settled by the creditors getting 40 or 50 per cent in addition to the 10 per cent already received by them.

One Year of Motor Cycling is the title of a small booklet being distributed by the Hendee Mfg. Co., of Springfield, Mass. It tells of the season's experience of G. B. Gibson, D. D. S., who is an enthusiastic rider of the Indian, and is a good recommendation of motor bicycling.

The Veeder Mfg. Co., of Hartford, Conn., is calling the attention of the trade to the fact that a very useful adaptation of the Veeder odometer is its application to commercial vehicles for the purpose of securing data from which exact cost of operation may be determined.

The "waterless" Knox catalogue just issued by the Knox Automobile Co., of Springfield, Mass., is another of the several indications this year that automobile advertising is fast becoming of the highest class. The catalogue ranks well, both in compilation, illustration and typographical excellence. Small wash drawings to embellish each page are especially noteworthy.

Louis R. Smith, formerly of MOTOR AGE, makes an excellent suggestion for the accommodation of the St. Louis tourists. "By the time the various tours amalgamate at Buffalo," says he, "they will form a body of several hundred men. West of Buffalo there will have to be night stops at places where the hotel accommodations will be insufficient. In this emergency it might be a good idea to appeal to the railroads to furnish a train of

sleeping cars and a dining car to meet the tourists at the small night stops and feed and lodge them."

Eighty-three citizens of Savannah, Ga., have registered their automobiles, and there are still a number who have failed to comply with the law.

The Michigan Automobile Co., of Grand Rapids, has established a branch house in Muskegon, Mich., which will be under the management of Norman Graves.

The A. C. A. governors have resolved to ask the New York city government to test luminous macadam on West Seventy-second street between Central park and Riverside drive, which is greatly in need of repair.

Ed Lozier, of the Lozier Motor Co., of New York, spent the past week in Chicago, in the interest of Lozier motors and boats, for which the Githens Bros. Co. is the Chicago agent. The Lozier company is now entering the speed boat field energetically.

G. Stewart, who for 9 years was superintendent of the manufacturing department of the George N. Pierce Co., of Buffalo, N. Y., has gone to San Francisco, Cal., and has entered the mechanical department of the Mobile Carriage Co. Mr. Stewart built the first automobile which the Pierce company turned out.

Coldwater, Mich., began the winter of 1903 with eight automobiles owned in the town. Many of the citizens spent the long winter evenings reading automobile journals and catalogues, and as a result an order was placed last week for the twenty-fifth machine for Coldwater. Other citizens are beginning to sit up and take notice, and Coldwater promises to become the premier automobile town of Michigan.

Have you heard of the Thomasine and wondered in what particular it differed from the limousine? The E. R. Thomas Motor Co. says there is a distinction beside that of name, and that it is that in the Thomasine the windows may be quickly opened to convert the car into one closely resembling a regular canopy top car, and without offering the greater wind resistance that is offered by a regular limousine should the windows be removed from their heavy casings.

The Mahoning Motor Car Co. completed its organization at Youngstown, O., last week and the work of equipping its machine shop will begin at once. The company will be in conjunction with the Youngstown Carriage & Wagon Co., and Charles T. Gaither, formerly of the Fredonia Mfg. Co., will have charge of the automobile department. The plans are to turn out a runabout and a four-passenger car. The officers elected are: President, L. E. Cochran; vice-president, W. J. Hutcheon; secretary, D. E. Webster; general manager and treasurer, W. P. Williamson.

The Long Island Automobile Club inaugurated its series of Sunday runs this week. The destination was Old Westbury. Luncheon was had at the Inn.

W. S. Daniels, of Grand Rapids, Mich., and W. O. Harlow, of Kalamazoo, Mich., have opened an automobile store in the latter town. Mr. Harlow has the management of the house, which will be known as the Kalamazoo Automobile Agency.

A delegation of the Moto Club of Belgium has tried in vain to persuade the government officials that it is unnecessary to have the same automobiles weighed each year, but the government claims an automobile might become heavier from one year to another.

The employees of the Junnita shops of the Pennsylvania railroad at Altoona, Pa., have decided to purchase an automobile ambulance for their own immediate use in conveying the sick and wounded to the Altoona hospital. The ambulance will be kept at the shops and in case of emergency will assist the Altoona hospital. The distance from the shops to the hospital is over a mile.

Joseph Cowan, a former Wall street broker, is to open this week a suburban resort for New York automobilists. It is situated on the sound and is to be known as Clason Point Inn. The appointments and landscape decorations will be on an elaborate scale. A line of touring cars will be run from Westchester station to the inn and motor boats will also convey patrons from the Harlem river.

The E. R. Thomas Motor Co., of Buffalo, N. Y., has caught the racing fever and is now building a six-cylinder motor racing car of 50 horsepower. The company is so convinced of the correctness of the triple-cylinder motor as adapted to the regular Thomas models, that it will accept special orders for six, or as it calls them, double-triple-cylinder motor machines, fitted with different styles of bodies and of 24, 30 or 40 horsepower.

The Rushmore Dynamo Works, of Plainfield, N. J., says that the Cadillac Automobile Co., of Detroit, and the Standard Automobile Co., of New York, the latter importer of the Deauville, have decided to equip all of their cars with Rushmore lens mirror searchlights. The selling prices of the cars do not include the searchlights, but the latter are put out on the machines on 2 weeks' trial and it is expected that after they have demonstrated their light throwing ability on dark nights few customers will return them.

The business of the Conrad Motor Carriage Co., of Buffalo, N. Y., will be continued 90 months longer, and on June 1 the plant and other assets of the concern will be sold at auction, according to the decision of Referee Hotchkiss in the bankruptcy court last week. The report of Trustee Hayes shows that there are orders on hand amounting to more than \$7,000, and it will take at least 2 months to fill them. The trustee has about \$5,000 on hand. The concern is doing considerable business, but it was stated that it was being conducted at a loss. It was thought best to dispose of the stock in this manner, as the

loss through the sale of machines would not be so great as through the sale of the stock at auction.

Ray D. Lillibridge, has returned to New York after spending 2 months on the Pacific coast in the interest of the White Sewing Machine Co.

A Pope-Waverly electric car has been shipped from Indianapolis, Ind., to Australia, where it will be tried in the mail service. The car is painted a bright red, which is the color of all vehicles used in the Australian mail service.

The mayor of St. Louis has appointed a special committee to welcome the automobilists to the city on the occasion of the big tour. As President Roosevelt has been invited to the exposition on St. Louis day it is probable that he will review the tourists on their entry to the exposition, which is set for August 10.

The Richmond-Jarvis Co., of Grand Rapids, Mich., will fit up one of its store buildings for the use of the sporting fraternity. Magazines and books on automobiling, bicycling, golf, baseball and kindred sports will be kept on hand, and the rooms will always be open for meetings of the automobile club and similar organizations.

Snell's hydraulic system of storing, handling and measuring oils as described and illustrated in a booklet issued by the Van Huse & Farr Co., 518 Hammond building, Detroit, Mich., is interesting to automobilists because the system is well adapted to the storage of gasoline in private automobile stables, in garages and in stores.

Phinney Jones & Co., of Newark, N. J., makers of wood wheels, offer their services to all who have automobile wheels of foreign or domestic make which it is desired to repair, or alter in diameter and in style of felloe to accommodate different tires. The concern is familiar with all the foreign makes of wheels and says that in such work it will use only high grade second-growth hickory. It does not undertake repair work on steel wheels.

The Randall Motor Car Co., of Fort Wayne, Ind., was organized last week, the principal stockholders being A. L. Randall, manager of the Randall Wheel Co., and Louis Ohnhusa. The capital stock is \$10,000, and all but a small block is held by these two men. The company has leased a two-story brick building on Maiden Lane, and will convert it into a modern garage which will be occupied this year, and next year larger quarters will be secured.

The automobilists of Detroit, Mich., will not have to carry tags or pay a license if John P. Schneider, an automobile dealer of that city, succeeds in his attempt to prove that the law is unconstitutional. Mr. Schneider has received much encouragement from automobile owners and he will have the support of nearly all of them. The recent decision in the Banker case at Chicago has greatly encouraged him, and he has sought advice from Sidney S. Gorham, counsel for the Chicago Automobile Club, who can be of considerable assistance in pointing out the defects in the Detroit ordinance.

Wright & West have secured the Rambler agency for Stockton, Cal.

As a result of the eloquent and diplomatic address of President Scarritt, of the Automobile Club of America, the Road Drivers' Association of New York has become an ally of the automobilists in opposing hostile legislation and especially local speed control as proposed by the pending bill.

A kilometer hill-climbing contest took place near Alger, Africa, March 11. Baron J. de Crawhez, on a 70-horsepower Panhard racer made the fastest time, 1:11 1/2. Malglaive, on a 45-horsepower de Dietrich, was second in 1:14. The two heats reserved to tourists were won by Bellemare, on a 14-horsepower Renault in 1:38 1/2 and Barre de Comagac, on a 16-horsepower Darracq in 1:40.

A Turin sporting journal has arranged two excursions in connection with the Gordon Bennett race in Germany. One will be a touring caravan and the other a railroad party. The tourist section will make the trip from Turin to Frankfurt in 3 days, the mileage being respectively 176, 132 and 203. The return trip will also cover a period of 3 days with a mileage of 142, 185, and 229, respectively.



GERMAN MILITARY MOTORISTS

The latest French automobile to make its appearance will be seen at Ringling Bros. circus in Chicago next week. The Cadillac company has built a special car for the use of the baby elephant in one of the acts. The car is nearly 12 feet long and has one huge seat that will comfortably accommodate the baby, which weighs 2,650 pounds—without goggles. As the elephant dashes around the arena with his forepaws on the steering gear, giving exhibitions of his dexterity in handling the machine, the audience is not supposed to know that a man concealed in the big bonnet does the steering.

The firm making the Hydra batteries and plugs offers what is called the Hydra cup, which will be given to the manufacturer of the motor cycle with which the 100 kilometers record is established. The driver of the machine, which must have a gasoline capacity of 5 pints, will be allowed \$1 per day during one year. The motor cycle must be equipped with Hydra batteries and plugs and the rider must not weigh less than 165 pounds. The race is to be run on the Parc des Princes track, Paris, and if the record remains unbroken during 12 months, a race must be organized over the distance of 100 kilometers.

It is reported that there is a demand for motor cycles in Russia, and that Messrs. Outotshkin, of Odessa, are especially in the market for such machines.

W. H. Topp, of Manlius, N. Y., is engaged in constructing an automobile which will be something of a novelty in the way of a horseless carriage. It will consist of two tandems with a seat between and will be propelled by a air-cooled motor.

Bucyrus, O., boasts of having twenty automobiles with a population of 7,000 people. There are more automobiles in proportion to the population than there were bicycles in the days when the bicycle was as new as the automobile is now.

General Manager R. M. Owen, of the Automobile Storage Co., of New York, was in Syracuse, N. Y., last week and made arrangements with a local company for the manufacturing of a large number of four-cylinder cars with tonneaus for the New York trade.

Thomas B. Jeffery & Co., of Kenosha, Wis., wish it stated that there is no truth in the rumor that they have opened a branch house at Milwaukee, Wis., for the sale of Rambler cars. The Rambler is sold in Milwaukee by George Bailey, whose repository is at 312 Wells street.

After the Paris-Madrid race, l'Auto started a subscription in favor of the families of the drivers that were killed. Only \$918 was received, which was equally divided between the widows of M. Robes, who drove Lorraine-Barrow's car, and the widow of M. Normand, who was Mr. Tournaud's driver.

Although the annual Ostende meeting will not take place until July 18, six entries have already been received. They are Baron de Caters, who will drive a Mercedes; Henri and Achille Fournier, who drive Hotchkiss cars; Angier and Hauptmann, who will take care of Pipe racing machines; and Evance Coppe, who will be the pilot of a new Panhard racer.

According to a Belgian publication, last year's total output of motor cycles in France was about 20,000, while the two principal Belgian motor bicycle factories put out nearly as many. The total number of machines reached nearly 35,000 in Belgium. The output for Europe during the present season is estimated at 90,000. The popularity of the little machines is gaining in Belgium and Germany.

An automobile transportation company has been incorporated at Lyons, France, with a capital of \$60,000. Six different routes will be operated. The one from Lyon to Grenoble, 72 miles, will pass through forty-eight localities, that from Lyon to St. Etienne, is 38 miles long with thirty localities where stops will be made; the Lyon-Annonay route is 56 miles long, with thirty-six stops; there will be thirty-three stops along the road from Lyon to Macon, a stretch of 45 miles; 57 miles separate Lyon from Roanne, and there will be thirty-four stops, while between Lyon and Bourg, distant from each other 40 miles, the automobiles will stop at thirty-seven localities. All told there will be 220 villages and hamlets visited over a total mileage of 308.

# Motor Boating



## BUILDS FAST BOATS

Syracuse, N. Y., March 28—With upwards of fifty motor boats in winter quarters at the Syracuse Yacht Club on Onondaga lake, and the approach of the boating season, owners of this sort of craft are anxiously awaiting the days when the lake will be free from ice and they will again have opportunity to test the powers of their craft, which include some of the finest and swiftest in central New York, not excluding H. J. Leighton's Adios, the fastest motor boat in America.

Principal among the coming events will be the midsummer races of the Inter Lake Yachting Association on Cayuga lake, arrangements for which are under way. Syracuse men are also well represented among the light craft on the St. Lawrence river about the Thousand Islands, several having their own boats there and other island visitors owning boats of Syracuse construction.

The Syracuse boat owners all point with pride to H. J. Leighton's Adios and many from other sections have been compelled to do so. This fleet craft is capable of 24 miles an hour and proved the fastest entered in the American Power Boat Association races, held under the auspices of the Brooklyn Yacht Club at New York August 29, 1903, when, under the guidance of its owner and maker, it covered 10½ knots in 30:50, compared with 42:40, the corrected time of the boat which followed it over the line.

Not only do the yacht club members point with pride to the Adios because it represents their club, but because the credit of constructing it also belongs to one of their number. The Adios is 55 feet long, 7 feet 8 inches wide and is equipped with a 120-horsepower eight cylinder motor, the first eight-cylinder motor to be placed in any boat. She is built not alone for speed but for durability as well, unlike most of the speed craft. It is valued at \$10,000.

The Adios is but one of Mr. Leighton's triumphs. Others are his 4, 7, 10, 12, 18, 25, 60 and 90 horsepower marine motors, which are constructed by him from the battery, spark coil, dynamo, mufflers, coupling, stuffing box, shaft and three-blade reversing propeller, with reversing gear attached to engine, as is shown in the reproduction of the 25-horsepower engine.

Two other boats constructed by Mr. Leighton, and which have attracted considerable attention, are Hurlbut W. Smith's Premier, a 25-horsepower boat, 45 by 7½ feet, and capable of making 15 miles an hour, and

Alexander T. Brown's Erro, 55 by 6 feet, with an 18-horsepower motor and a speed of 20 miles an hour. He also built the following boats, each of which has distinguished itself in more than one competitive race: Zaza, 45 by 5 feet, 25 horsepower, speed 18 miles, owned by William I. Serrell, of Rayonac, N. J.; Alkimos, 36 by 5 feet, 18 horsepower, speed 20 miles, owned by E. C. McGraw, Pittsburgh, Pa.; Carmencita, 55 by 6 feet, 60 horsepower, speed 20 miles, owned by D. H. Lyon, Ogdensburg, N. Y.; Priscilla, 55 by 6 feet, 60 horsepower, speed 20 miles, owned by H. A. Richardson, Dover, Del.; Pisk, 22 by 4 feet, 7 horsepower, speed 14.8 miles, owned by J. Wainwright, Philadelphia, Pa.; Overbrook, 37 by 6½ feet, 25 horsepower, speed 15 miles, owned



MOTOR AGE THE ADIOS

by J. Wainwright, Philadelphia, Pa.; Kittiwake, 40 by 6 feet, 25 horsepower, speed 16.8 miles, owned by J. H. Johnson, Clayton, N. Y.; Hageneagh, 37 by 5 feet, 25 horsepower, speed 19 miles, owned by A. T. Hagen, of Rochester, N. Y.; Arrow, 36 by 5 feet, 18 horsepower, speed 15 miles, owned by H. DeCamp, Fulton Chain, N. Y.; and Velda, 30 by 5 feet, 12 horsepower, speed 12 miles, owned by J. B. Baynes, Buffalo, N. Y.

Most of these boats are at Thousand Islands, where they frequently meet in friendly races during the summer season. Mr. Leigh-

ton has now a number of small boats under construction at Brewerton, 15 miles from here on Oneida lake.

The Adios, which is a favorite with all Syracuse skippers, has a heavy hull, is of cedar planking, oak frames, copper fastenings, and mahogany deck. The interior is paneled in mahogany and has a removable top of the same kind of wood. In making this, as well as other boats, it was Mr. Leighton's aim to make it for speed without sacrificing comfort, in both of which he succeeded. They are not racing boats, but are built as light as good practice allows, but, due to their model, they are faster and sturdier than the conventional boat of much greater beam.

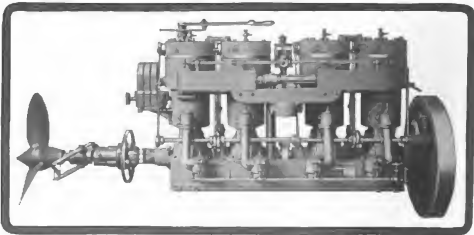
In speaking of his engines Mr. Leighton says they are all of the multiple cylinder, two-cycle type, and somewhat lighter than the ordinary marine motor, but the bearings and wearing surfaces are ample for continuous heavy duty.

## FAST ONE FOR CLEVELAND

Cleveland, O., March 28—A new speed boat will make its appearance in Cleveland about June 1. It is being built for Ralph Owen and C. W. Schmidt, Jr. The designs are being prepared in the east and designers, builder and owners are looking forward to some remarkable speed tests when the new flyer is completed. Her dimensions will approximately be as follows: Length over all, between 50 and 60 feet; water line, about the same; beam, 6 feet; draft, 2½ feet. Her bow will be very high and sharp and she will taper aft to practically nothing. She will have a three-cylinder engine of the four-cycle type of a guaranteed 38-horsepower. It is estimated that she will make upward of 20 miles an hour.

## MOTOR BOATS IN WASHINGTON

Washington, D. C., March 26—Clarence H. Palmer, sales manager of the Racine Boat Mfg. Co., was here during the week and closed with the National Capital Automobile Co. to handle the Racine line of motor boats. It is the intention of the company to devote a portion of the third floor of its new garage, described elsewhere in this issue, to the boats. A boat house will also be built on the water front. The national capital offers splendid inducements to users of motor boats and it is expected that a large number will be sold during the season. The Potomac river, famed in history, is one of the finest streams in the country for boating of all kinds and especially adapted for motor boats.



MOTOR AGE

A LEIGHTON FOUR-CYLINDER, TWO-CYCLE SPEED BOAT MOTOR

# AMERICAN MOTOR LEAGUE

## OFFICERS:

ISAAC B. POTTER, President,  
Potter Building, New York.  
CHARLES E. DURYEA, First Vice-Pres.,  
Reading, Pa.  
W. GRANT MURRAY, Second Vice-Pres.,  
Adrian, Mich.  
B. W. MERRIHEW, Third Vice-Pres.,  
154 Nassau St., New York.  
ROBERT L. STILLSON, Secretary,  
150 Nassau St., New York.  
FREDERICK B. HILL, Treasurer,  
52 Binford St., Boston.

National Headquarters:  
150 Nassau Street, New York



## CHAIRMEN OF NATIONAL COMMITTEES:

LEGISLATION—  
George B. Bidwell, New York, N. Y.  
ROAD IMPROVEMENT—  
B. E. Oida, Lansing, Mich.  
LOCAL ORGANIZATION—  
Charles F. Potter, Denver, Colo.  
TOURING—  
W. H. Baker, Buffalo, N. Y.  
TECHNICS—  
Charles E. Duryea, Reading, Pa.  
MEMBERSHIP—  
Frank A. Egan, New York, N. Y.  
SIGN BOARDS—  
John B. Price, Halesboro, Pa.  
RACING—  
A. G. Battefelder, New York, N. Y.  
PRESS—  
Joseph Estacide, Philadelphia, Pa.  
HOTELS—  
Francis N. Bata, Newburg, N. Y.

## OFFICIAL BULLETIN

### WORK AT HEADQUARTERS

For the last 6 weeks the work at league headquarters has been mainly directed to the making of new lists and new forms of records. This became necessary because of the increasing number of names and addresses received by the secretary and a great variety of information relating to different departments of work which must be arranged and classified to insure systematic work in the future. In the meantime the season for recruiting has not been most favorable and the return of spring will now witness a renewed and more effective effort to build up the organization.

### CONSULS WANTED

A list of newly appointed consuls will soon be announced. They are members who believe in the league and are willing to do something to make it successful. There are many such members in all parts of the country and the league needs the help of all. There will be, say, 15,000 new users of motor cars in the country this year, every one of whom should belong to a national organization. How does it happen that a member who lives in a given town sends a dozen applications for membership to headquarters, while his next door neighbor—a man of perhaps wider acquaintance and greater influence—sends none? The question suggests its own answer.

If the reader of these lines is willing to exert his personal effort toward building up the organization in his locality, a brief line to that effect will be gladly received at headquarters.

### LEGISLATION

Many letters have been sent from headquarters to members of the legislatures and to members of the A. M. L. with the view of influencing the passage of better laws during the present sessions of the legislatures. It cannot be hoped that any strictly fair and equitable law will be passed relating to the use of motor cars until automobiles are so strongly organized as to demand their rights with the reasonable hope of having such demand respected.

### OFFICIAL HOTELS

The league is preparing a list of reliable hotels and will be glad to receive from automobilists the names and locations of such hotels, and the names and addresses of proprietors, in any part of the country. A good list is not necessarily a grand and elaborate

one. Good food, good service, clean, comfortable beds and decent accommodations are the real essentials. This, at a fair rate of charge, will attract the touring automobilists and the league will be pleased to recommend such hotels and to place them upon the official list as rapidly as they can be sought out and reported at headquarters.

### MORE ABOUT ROAD BOOKS

Many letters are being received from members who ask for road books. No road books have yet been issued and when issued will be promptly distributed and no request will be necessary. Road books will be printed as rapidly as the increase of membership—and the consequent prosperity of the league—will warrant, and one of the busiest departments of league work for the next year or two will be the preparation of maps and texts describing roads and tours in all parts of the country. It should be remembered that the A. M. L. is the only organization of automobilists that has actively taken up this work and it is therefore entitled to the support of every automobilist who believes that touring should be encouraged and that the printing of road books is a very important branch of organization work.

### ARE YOU A MEMBER?

The league invites to its ranks every automobilist of the age of 18 years and upwards and every person who is friendly to the use and development of the motor car. It wants good people but it does not want everybody. It is organized to accomplish useful and beneficent purposes and to yield benefits to the cause and to the individual. The officers of the league will be pleased to send circular information explaining the nature and objects of the A. M. L. and membership blanks to any reader who will send his name and address for that purpose. There is no initiation fee. The annual dues are two dollars payable in advance, and this sum is paid by all members old and new.

### THE AUTOMOBILE HAND BOOK

The preparation of this book has had the conscientious attention of its author, Charles E. Duryea, during such hours as he could spare from a very exacting business within the last year, and is now approaching the point where it can be placed in the hands of the printer. Its usefulness will be apparent to every reader and a free copy will be given to

each member of the organization. It will be plainly written, terse, snappy and useful. It will be a volume of hints and helps for all persons who use automobiles and other motor vehicles. It explains, in plain words, the power used in driving motor vehicles; the nature and uses of gasoline and the causes and remedies of common motor troubles. It reviews in a brief practical way the various reasons and remedies to be considered at times when the carriage "won't go." In brief, while not aspiring to the dignity and bulk of "exhaustive" treatise, this little book will contain essential and important information in handy form and will be welcomed by every reader who is not already an expert in the knowledge and experience of automobilizing.

### GOOD ROADS

The league will shortly send out a little book on macadam roads, a practical illustrated hand book giving a digest of the best information obtainable on the subject of road making under the macadam system. It has seventy-two pages and seventy-two illustrations. There are five chapters carefully covering the following subjects: History and description of macadam roads, grades, drainage, making the macadam surface, and maintenance of macadam roads. It contains the meat and pith of the best information gathered from the experience of the best European and American road makers. It tells what a macadam road is; describes old and new methods, shows that macadam roads are easy to make and easy to maintain; gives simple rules for construction and estimates of cost; tells why rolling is necessary and how rolling should be done. It treats of grades and drainage, describes the different kinds of stone, tells what stone is suitable and what is not, refers to trap, limestone, field stone, river stone and other varieties and tells how to use them. Gives the very information that is needed and has been specially commended by the United States government officers in charge of the road inquiry bureau at Washington. This little book will be ready for distribution by May 15 and a copy will be sent to any member who makes request by postal card. It is hoped and believed that this beginning will stimulate the interest of automobilists in the good roads work of the league, and will attract many to the organization whose interest lies especially in the useful efforts of the organization rather than in departments which relate purely to the development of a sport.

"THE ARISTOCRAT OF AUTO CARS"

# F•I•A•T

**Automobiles**  
— AND —  
**Auto Boats**



16-20 H. P. CAR, WITH "KING OF BELGIANS" BODY.

The highest grade automobile manufactured. Made entirely in our factory at Turin, Italy, one of the best equipped on the continent. Motors 16-20 H. P., 24-30 H. P. and 60 H. P., fitted with four cylinders. All the popular styles of body are carried in stock. Special styles built to order promptly. By pressure on a simple foot pedal ignition is advanced and throttle opened simultaneously, in proportion to speed of engine. No other motor is so simple, no other combines so much speed and power with absolute reliability. Made for those who want the best.



**Hollander & Tangeman**

Licensed Importers Under Selden Patent

**5 West 45th Street**

**NEW YORK CITY**

**Sole Agents for United States and Canada**



# MOTOR AGE

VOL. V. NO. 14

APRIL 7, 1904

\$2.00 Per Year

## THE A. C. A. COMMERCIAL VEHICLE TEST

New York, April 4.—Seventeen motor wagons started out this morning to prove of how little worth for commercial purposes is the horse when given a practical side-by-side comparison with gasoline, steam or electricity, or gasoline and electricity combined as a means of traction or propulsion for road vehicles. The occasion was the commercial motor wagon service test, being promoted by the Automobile Club of America. The method of proof is to be the placing of fifteen wagons with a carrying capacity up to 5,000 pounds in the actual service of the American and Westcott express companies and of two 5-ton trucks guaranteed to haul their equal weight in the employ of the H. B. Clausen & Son's Brewing Co. for 6 days of continuous employment, as substitutes for the horse-drawn vehicles now in use.

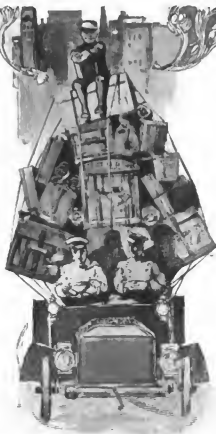
The schedule of the test as laid out by the club's contest committee in co-operation with the officials of the express and brewery companies is marked by the depth of forethought and completeness of detail characteristic of all the club's promotions, whether in the line of pleasure, speed or utility demonstrations.

The competitors have been divided by the contest committee—J. A. Hill, Emerson Brooks and R. R. Conklin—into six classes, according to the dead loads they have taken upon themselves to carry in this commercial test.

In the strict wagon class these loads run from a 500-pound minimum to a 5,000-pound maximum. The lightest class is made up of two 5-ton trucks rated to carry 10,000 pounds each. The range of weights of the competitors with full equipment of fuel and tools aboard, exclusive of living freight, is from the 1,225-pound Olds gasoline delivery wagon to the 10,100-pound Herschman steam truck.

The express company service embraces sixteen different routes ranging from  $6\frac{1}{2}$  to 30 miles for the total of a day's run. The route assignment is so arranged that when the wagons of each class complete their 6 days of service they will have covered the same routes. The work to be performed varies from deliveries in the congested sections of the city to long runs into the far uptown or across the East river districts.

The trucks which have been placed in the service of the brewing company will make long trips to Flushing, Yonkers and South Brooklyn, making deliveries of half-barrels of beer at these distant points and collecting



“empties” on the way back. Altogether a most convincing demonstration to a trade that has shown itself ready to take up the motor wagon on satisfactory proof of its economy and efficiency.

Each wagon was weighed on Saturday with full equipment of fuel, tools, etc., exclusive of live freight. During service each carries a driver furnished by the maker, an employee of the express or brewing company to handle the freight, and an official observer to make a complete record of the daily run. These observers are changed daily. Each wagon is fitted with an odometer to record the exact mileage, of which only an approximate schedule is possible, owing to deliveries requiring more or less in and out running in side streets included in the allotted routes. In the case of some of the light delivery wagons, when it was impracticable to carry three passengers, the express company's employee was under the official observer. Among the observers were four or five Columbia college students assigned by the scientific department.

At night the electric wagons are stored in their official garage—New York Transportation Co., located on Eighth avenue—and the steam and gasoline wagons in their garage—Metropolitan Motor Car Co., 154 East 157th street—under charge of the club's representatives, in whose presence necessary repairs may be made. Each night after the day's route has been covered the official observers are required to hand in their record cards. The press is to be given access to these cards and take from them the rough results of the day's runs. First, second and third medals are to be awarded in each class for the best performance, based on economy of operation, in time and fuel, ratio of paying load, ton mileage and general reliability and availability for service.

The great utility of a test made on such practical lines as these is a time when the introduction of the motor wagon to industrial and commercial transportation is dependent entirely upon absolute proof of its ability to increase efficiency and lessen operating expense, is obvious. The broad-minded spirit of the A. C. A. is departing from the strictly pleasure and sporting features of its existence to assist in developing this great commercial field of the automobile is worthy of general commendation from the members of the automobile trade in this and other countries.



C. J. BLANTHORN, MASTER  
OF TRANSPORTATION OF  
EXPRESS COMPANY





LEAVING EXPRESS STATION WITH LOAD

## SERVICE ROUTE SCHEDULE

ROUTE 1—Madison avenue depot, 8 a. m., to Jamaica, L. I., via Brooklyn bridge, 8 and 10 Fulton street; thence Dean street to 1400 Fulton street; Fulton street to East New York depot; Jamaica avenue to Jamaica, L. I. Returning via Richmond hill and Myrtle avenue to 106 Broadway office, thence via Williamsburg bridge to Madison avenue depot. Distance 30 miles.

ROUTE 2—Madison avenue depot, 8 a. m., to Flushing, L. I., via Brooklyn bridge, 8 and 10 Fulton street, 1129 Myrtle avenue; through Melrose street to Flushing avenue; Grand street and Brooklyn Heights railroad line, via Corona, to Flushing; returning via Brooklyn Heights railroad line and Grand street, to 106 Broadway, Brooklyn; then via the Williamsburg bridge to Madison avenue depot. Distance 25 miles.

ROUTE 3—Madison avenue depot, 8 a. m.—West side transfer service between Madison avenue depot and West 125th street, stopping at 683 and 315 Columbus avenue in both directions and repeat. Total distance 14 miles.

ROUTE 4—Madison avenue depot, 8 a. m.—East side transfer service between Madison avenue depot and 138th street, stopping at Seventy-second street and Third avenue and Eighty-sixth street and Lexington avenue and re-

peat. Total distance covered was 16 miles.

ROUTE 5—Baggage service—Grand Central station 8 a. m. First Trip—Leave Depew place at 8 a. m., deliver baggage from Fourteenth street to Maiden lane, Fourth to Sixth avenues; West Broadway to Mott street. Second Trip—Leave Grand Central depot 12 noon; baggage to Pennsylvania railroad depot, foot of West Twenty-third street. Third Trip—Leave Grand Central depot 2:30 p. m.; baggage delivery to hotels, etc.; Forty-second to Tenth streets; Fourth to Sixth avenues. Total distance 14 miles.

ROUTE 6—Madison avenue depot, 6 a. m. Merchandise delivery, Fourteenth to Thirty-fourth street; Third avenue to East river. Repeat. Total distance 8 miles.

ROUTE 7—Madison avenue depot, 8 a. m. Transfer service between Madison avenue depot and 65 Broadway, making all offices south of Forty-seventh street; two round trips, then to office at Fourth street and Lafayette place for load to the depot. Distance 7 miles.

ROUTE 8—Madison avenue depot, 8 a. m. Merchandise delivery, from Forty-seventh to One Hundred and Tenth streets; Fifth avenue and Central park to North river. Repeat. Total distance 13 miles.

ROUTE 9—Madison avenue depot, 8 a. m. Merchandise delivery. Forty-seventh to One

Hundred and Tenth streets; Fifth avenue and Central park to East river. Repeat. Total distance 13 miles.

ROUTE 10—Madison avenue depot, 8 a. m. Package delivery, Twenty-third to Fifty-ninth streets, Fifth to Seventh avenues. Repeat. Total distance 8 miles.

ROUTE 11—Madison avenue depot, 8 a. m. Package delivery. Fourteenth to Thirty-fourth streets; Fifth to Seventh avenues. Repeat. Total distance 6½ miles.

ROUTE 12—Madison avenue depot, 8 a. m. Package delivery. Fourteenth to Thirty-fourth streets; Second to Fourth avenues. Repeat. Total distance 6½ miles.

ROUTE 13—Madison avenue depot, 8 a. m. Package delivery. Houston to Fourteenth streets; Third avenue and Bowery to East river. Repeat. Total distance 8 miles.

ROUTE 14—Madison avenue depot, 8 a. m. Merchandise delivery, Fourteenth to Thirty-fourth streets; Seventh avenue to North river. Repeat. Total distance 9 miles.

ROUTE 15—Madison avenue depot, 8 a. m. Market delivery to Fulton fish market, bring load of fish from market to depot, then make trips between Madison avenue depot and 443 West One Hundred and Twenty-fifth street, stopping at 315 and 683 Columbus avenue in both directions. Distance 13 miles.

ROUTE 16—Madison avenue depot, 8 a. m. Market delivery of fish to Fulton fish market, bring load of fish from market to depot, then make trips between Madison avenue depot and One Hundred and Thirty-eighth street, stopping at Third avenue and Seventy-second street and Lexington avenue and Eighty-sixth street in both directions.

## FIRST CLASS—LOAD UNDER 1,000 LBS.

Knox Automobile Co., No. 4—Monday, Route 8; Tuesday, Route 10; Wednesday, Route 9; Thursday, Route 11; Friday, Route 12; Saturday, Route 13.

Olds Motor Works, No. 7—Monday, Route 9; Tuesday, Route 8; Wednesday, Route 10; Thursday, Route 12; Friday, Route 13; Saturday, Route 11.

Olds Motor Works, No. 8—Monday, Route 10; Tuesday, Route 9; Wednesday, Route 8; Thursday, Route 13; Friday, Route 11; Saturday, Route 12.

## SECOND CLASS—OVER 1,000, UNDER 2,000 LBS.

Knox Automobile Co., No. 5—Monday, Route 8; Tuesday, Route 6; Wednesday, Route 10; Thursday, Route 9; Friday, Route 12; Saturday, Route 11.



THE CANTONI ELECTRIC TRACTOR



THE ROCKLIFY GASOLINE DELIVERY WAGON



THE WATKINS ELECTRIC LIGHT DELIVERIES

Pope Motor Car Co., No. 11—Monday, Route 9; Tuesday, Route 10; Wednesday, Route 8; Thursday, Route 6; Friday, Route 13; Saturday, Route 14.

Pope Motor Car Co., No. 12—Monday, Route 10; Tuesday, Route 9; Wednesday, Route 6; Thursday, Route 8; Friday, Route 14; Saturday, Route 13.

Cantone Electric Traction Co.—Monday, Route 13; Tuesday, Route 14; Wednesday, Route 12; Thursday, Route 11; Friday, Route 9; Saturday, Route 6.

#### THIRD CLASS—2,000 to 3,000 LBS.

Charles Rockliff, No. 2—Monday, Route 1; Tuesday, Route 2; Wednesday, Route 3; Thursday, Route 4; Friday, Route 5; Saturday, Route 7.

Landsen Motor Co., No. 13—Monday, Route 2; Tuesday, Route 3; Wednesday, Route 4; Thursday, Route 5; Friday, Route 7; Saturday, Route 1.

Carlson Motor Vehicle Co., No. 10—Monday, Route 3; Tuesday, Route 4; Wednesday, Route 5; Thursday, Route 7; Friday, Route 1; Saturday, Route 2.

Knox Automobile Co., No. 6—Monday, Route 5; Tuesday, Route 7; Wednesday, Route 1; Thursday, Route 2; Friday, Route 3; Saturday, Route 4.

Consolidated Motor Co., No. 9—Monday, Route 7; Tuesday, Route 1; Wednesday, Route 5; Thursday, Route 3; Friday, Route 4; Saturday, Route 5.

#### FOURTH CLASS—LOAD 4,000 LBS.

Union Motor Truck Co., No. 3—Monday, Route 7; Tuesday, Route 1; Wednesday, Route 16; Thursday, Route 15; Friday, Route 5; Saturday, Route 7.

#### FIFTH CLASS—LOAD 5,000 LBS.

Electric Vehicle Co., No. 15—Monday, Route 2; Tuesday, Route 1; Wednesday, Route 15; Thursday, Route 16; Friday, Route 7; Saturday, Route 5.

### THE FIRST DAY'S TEST.

New York, April 5—The motor wagons as the result of their first day's run earned themselves with glory and gave the poor old horse a big push back toward his ultimate stygian stall. Even as early as 10 o'clock last night the returns received at the club showed all the cars but three in. Those still

out at that hour were the Herschman truck, which was reported as having reached Yonkers and made its delivery, and the Lansden and Columbia electrics, which were off on a long run to Flushing and through Brooklyn over route 2. All the gasoline wagons were back to their garage before 7 o'clock and not one of their drivers had asked the privilege of having overnight repairs made. The expressmen on the cars were enthusiastic over their performances as compared with the horse-drawn wagons. The Fischer truck had made a splendid run to Flushing with a 12,000-pound load in less than 10 hours, had made delivery, picked up empties and gotten back with a 4,000-pound load of empty barrels at 4:40 p. m., having made the 12-mile run home in an hour and 26 minutes.

The electric report cards were late in reaching the club and the observers had given but meager particulars in most cases. There was nothing in them, though, that was to their

discredit. An effort will be made to have fuller reports today.

The express company officials labored yesterday under the disadvantage of being unfamiliar with the capacity of the wagons. Monday, too, is a rush day with accumulated over-Sunday freight. They say they will be able to do more satisfactory loading today. They were much impressed by the easy and quiet handling of the wagons in backing into the station and up to their places at the platform to receive their loads. The quiet egress of the wagons from the station through the maze of trucks also impressed them. W. H. Long, superintendent of transportation; George W. Slingerton, general manager, and C. J. Blunthorn, master of transportation, were at the station most of the day. The club's contest committee is much indebted to them for their co-operation in arranging the details of the test. The routes covered by the cars were the regular routes for the horse-drawn vehicles in the service of the companies.

The three Knox delivery wagons repeated the successes of their prize-winning predecessors in the run of last spring. They had been driven down from Springfield by way of a preliminary trial. They left the factory at 7 o'clock on Friday night, encountered bad roads and did not reach Hartford until 8 o'clock the next morning and New York until Saturday night. They weighed in on Sunday. The journey of 150 miles was made without mishap or any repairs being required on their arrival in the city.

Both the little Olds made four trips over practically the same route, covering some 27 miles each and making an average of a delivery a mile. S. B. Chapin was on hand to watch their good work.

Sixteen of the seventeen starters showed up this morning for the second day's run. The only missing one was the Herschman steam truck, which had taken a load of 50 half-barrels of beer to Yonkers, and delivered them. This done, it was dark and the driver refused to go over a strange and hilly road at night. The truck was in good shape and



SECRETARY BUTLER GIVES FACTS TO NEWSPAPER MEN



MOTOR AGE

THE OLD AND THE NEW WAY

was to leave on the return trip for the city at 7 o'clock this morning.

The Lansden electric truck got in at 10 o'clock from its run of 31½ miles to Brooklyn and Flushing. It went 29 miles under its own power, but being unable to secure recharging at Flushing from either of the electric stations, it was towed home for the last 2 miles or so.

The Columbia electric truck, which also went to Brooklyn and Flushing, had hard luck. After running 20 miles and reaching the outskirts of Flushing its power gave out. It was towed into the village, but could get no "juice" at either of the advertised stations. It was towed back to town, reaching the garage at 11 o'clock.

The express company officials seem well pleased with the performance of the wagons. Their only criticism is that most of them lack sufficient capacity for their particular service. As a matter of fact, the Knox two-cylinder, the Consolidated, the Union, the Columbia and the Carlson alone are fitted with express work bodies.

"They certainly do make the deliveries quickly," said C. J. Blandthorn, master of transportation, who loads them, "but the capacity of most of them is insufficient for our work."

The Carlson wagon was not finished until 2 a. m. Sunday. It had been built in five weeks. Mr. Carlson said he was having trouble with hot engine owing to the newness of the machinery. The engine has four opposed cylinders, one cam shaft and a single vibrating coil.

The Cantono wagon consists of an electric tractor forming the forward truck.

## SUMMARY

CHARLES ROCKLIF, No. 2—Route 1—Left 8:40 a. m.; arrived 5:52 p. m.; covered 34½ miles; carried 900 pounds baggage.

UNION MOTOR TRUCK CO., No. 3—Route 1—Left 8:05 a. m.; arrived 6:16 p. m.; covered 34½ miles; carried 4,000 pounds merchandise and pig iron.

KNOX AUTOMOBILE CO., No. 4—Route 8—Left 8:20 a. m.; arrived 5:05 p. m.; covered 27½ miles; carried merchandise and packages; made 43 deliveries.

KNOX AUTOMOBILE CO., No. 5—Route 9—Three trips. Left 9:20 a. m.; arrived 6 p. m.; covered 34 miles. Carried merchandise and packages. Made 52 deliveries.

KNOX AUTOMOBILE CO., No. 6—Route 5—Four trips. Left 8:22 a. m.; arrived 5:30 p. m. Covered 28½ miles. Carried 2,100 pounds baggage.

OLDS MOTOR WORKS, No. 7—Route 10—Four trips. Left 8:22 a. m.; arrived 6:06 p. m. Carried packages. Made 27 deliveries.

OLDS MOTOR WORKS CO., No. 8—Route 9—Four trips. Left 9 a. m.; arrived 5:50 p. m. Covered 27 miles. Carried packages. Made 28 deliveries.

CONSOLIDATED MOTOR CO., No. 9—Route 7—Left 8:45 a. m.; arrived 7:20 p. m. Covered 25½ miles. Carried 1,400 pounds baggage. Made 37 deliveries.

CARLSON MOTOR VEHICLE CO., No. 10—Route 3—Left 9:20; arrived 11:05. Covered 11½ miles. Carried merchandise. Made 6 deliveries.

POPE MOTOR CAR CO., No. 11—Route 9—Left 8:45 a. m.; arrived 6 p. m. Covered 22½ miles. Made 42 deliveries.

POPE MOTOR CAR, No. 12—Route 10—Left 8:30; arrived 5:50. Covered about 28 miles. Carried 700 pounds packages. Made 40 deliveries.

LANSDEN MOTOR CAR CO., No. 13—Route 2—Left 9:05 a. m.; arrived 10 p. m. Covered 31½ miles. Carried 1,700 pounds baggage. Ran 29 miles on own power. Towed last two miles; unable to get recharging at Flushing.

ELECTRIC VEHICLE CO., No. 14—Route 4—Started 8:45 a. m.; arrived 6:35 p. m. Covered 37½ miles. Made 20 deliveries.

ELECTRIC VEHICLE CO., No. 15—Route 2—Ran 20 miles on own power. Could not get recharging at Flushing and was towed home.

CANTONO ELECTRIC TRACTOR CO., No. 16—Route 13—Three trips. Left 8:45 a. m.; arrived 5:30 p. m. Covered 29 miles.

FISCHER MOTOR VEHICLE CO., No. 17—Route 2—Left 6 a. m.; arrived Flushing 7:55 a. m. Made deliveries and picked up empties. Left Flushing 3:14 p. m. and arrived at brewery with 4,000 pounds of empties at 4:40 p. m. Started with load of 60 half-barrels of beer, weighing 12,000 pounds.

COMMERCIAL AUTOMOBILE CO.'s Herschman steam truck, No. 18—Reached Yonkers with 50 half-barrels beer and made deliveries. These completed, driver did not wish to negotiate strange, hilly road and remained over night.

## TUESDAY RESULTS

New York, April 6—The wagons in the service test are making fine records and are greatly impressing the express company and brewery officials and the public by the quick, effective delivery service they are rendering. The second day's work was carried on in good shape and without vehicle troubles save those reported in the following summary of the performances of Tuesday:

CHARLES ROCKLIF, No. 2—Route 2—Covered 32 miles, carrying 1,930 pounds of merchandise and iron.

UNION MOTOR TRUCK CO., No. 3—Route 2—Covered 35 miles, carrying 3,500 pounds of iron and boxes.

KNOX AUTOMOBILE CO., No. 4—Route 10—Made four trips, covering 24 miles and carrying 1,200 pounds of feed and merchandise.

KNOX AUTOMOBILE CO., No. 5—Route 6—Covered 23½ miles.

KNOX AUTOMOBILE CO., No. 6—Route 7—Covered 31½ miles, carrying merchandise.

OLDS MOTOR WORKS, No. 7—Route 8—Covered 32 miles.

OLDS MOTOR WORKS, No. 8—Route 1—Covered 27½ miles.

## THE PARTICIPANTS IN THE SERVICE TEST

No.	Maker	Wagon	Weight, Pounds	Load, Pounds	Driver	Observer, First Day
2	Chas. Rockliff, Brooklyn	15 h. p. gasoline delivery	4,962	2,340	Chas. Miller	F. W. Eversand
3	Union Motor Truck Co., Philadelphia	20 h. p. gasoline stake truck	6,850	4,000	E. Bromel	**F. O. Witthoft
4	Knox Automobile Co., Springfield, Mass.	16 h. p. gasoline light delivery	2,065	700	E. De Gowan	**W. Schmidt
5	Knox Automobile Co., Springfield, Mass.	8 h. p. gasoline light delivery	2,280	1,100	Adolf Grendler	**M. Hoff
6	Knox Automobile Co., Springfield, Mass.	8 h. p. gasoline light delivery	2,815	2,100	J. E. Cowan	**E. R. Mixer
7	Olds Motor Works, Detroit, Mich.	4½ h. p. gasoline light delivery	1,225	500	R. L. Lockwood	**T. Sullivan
8	Olds Motor Works, Detroit, Mich.	4½ h. p. gasoline light delivery	1,225	500	S. M. Smith	**L. McGuire
9	Consolidated Motor Co., New York City	7 h. p. gasoline delivery	3,450	2,500	Joseph Mallon	**M. Heidt
10	Carlson Motor Vehicle Co., Brooklyn	20 h. p. gasoline delivery	2,830	2,000	A. L. Joseph	**A. L. Joseph
11	Pope Motor Car Co., Indianapolis	Electric light delivery	2,465	1,100	J. S. Kirkpatrick	**C. P. Everhardt
12	Pope Motor Car Co., Indianapolis	Electric light delivery	2,465	1,100	D. B. Hughes	**T. J. Brandt
13	Lansden Motor Car Co., New York City	Electric express	2,760	2,000	J. G. Wernicke	**A. Schneider
14	Electric Vehicle Co., Hartford	Electric delivery	5,400	2,000	G. W. Gamack	**W. P. Abernethy
15	Electric Vehicle Co., Hartford	Electric truck	6,700	2,000	H. B. Farnham, Jr.	**C. J. Schaus
16	Cantono Electric Tractor Co., New York City	Electric delivery	3,300	2,000	J. Lawrence	**C. J. Schaus
17	Fischer Motor Vehicle Co., Hoboken, N. J.	25 h. p. gasoline-electric truck	14,050	10,000	.....	Lewis Sanders
18	Commercial Automobile Co., Jersey City	25 h. p. steam truck	14,100	10,000	.....	Henry

\*Expressman.

\*\*Columbia College student.

CARLSON GASOLINE DELIVERY WAGON  
KNOX GASOLINE LIGHT DELIVERY WAGONCOLUMBIA ELECTRIC DELIVERY WAGON  
UNION GASOLINE TRUCKHERSCHEMAN STEAM TRUCK  
UNION GASOLINE TRUCK

CONSOLIDATED MOTOR CO., No. 9—Route 1—Covered 55½ miles, carrying 2,378 pounds of merchandise and iron.

CARLSON MOTOR VEHICLE CO., No. 10—Route 4—Withdrew during the day; new machinery becoming overheated.

POPE MOTOR CAR CO., No. 11—Route 10—Made four trips, covering 46½ miles and carrying merchandise.

POPE MOTOR CAR CO., No. 12—Route 9—Carried 500 pounds of merchandise.

LANDSEN MOTOR CAR CO., No. 13—Route 3—Covered 33 miles, carrying 535 pounds; engaged in freight transfer between offices.

ELECTRIC VEHICLE CO., No. 14—Route 5—Made four trips, covering 25 miles and carrying 6,400 pounds of baggage.

ELECTRIC VEHICLE CO., No. 15—Route 1—Reached Jamaica, failed to secure recharge; returned late.

CANTONO ELECTRIC TRACTOR CO., No. 16—Route 14—Covered 23 miles, carrying trunks and boxes.

FISCHER MOTOR VEHICLE CO., No. 17—Route to Yonkers—Covered 32 miles, carrying fifty half-barrels, ten quarter-barrels of beer, weighing 5½ tons; returned light, reaching the brewery before 3 o'clock.

COMMERCIAL AUTOMOBILE CO., No. 18—Had remained over night at Yonkers; returned light too late for days' round.

#### SPLENDID SERVICE CONTINUES

The excellent performance of the vehicles on Monday and Tuesday continued today. The Carlson delivery wagon which dropped out yesterday will be put into service again Friday. The Herschman steam truck is out of the contest altogether. The summary of the work to date is:

UNION MOTOR TRUCK CO., No. 3—Route 16—Left 7:38 a. m., returned 5:08 p. m.; load 8,545 pounds fish and five passengers; covered 33½ miles; made nineteen service stops.

KNOX AUTOMOBILE CO., No. 5—Route 10—Left 8:05 a. m., returned 5:20 p. m.; load four packs aggregating 1,110 pounds; covered 21 miles and made fifty-three service stops.

KNOX AUTOMOBILE CO., No. 6—Route 1—Left 8:05 a. m., returned 2:15 p. m.; load 2,100

pounds of meat; covered 35¼ miles and made seven service stops.

OLDS MOTOR WORKS, No. 7—Route 10—Left 8:30 a. m., returned 6 p. m.; made four trips; load 1,260 pounds; covered 33 miles and made fifty service stops.

OLDS MOTOR WORKS, No. 8—Route 8—Left 8:15 a. m.; returned 5:50 p. m.; made three trips, 39 miles, fifty-four service stops.

CONSOLIDATED MOTOR CO., No. 9—Route 2—Left 8:17 a. m.; returned 3:25 p. m.; load 2,600 pounds pig iron and meat; covered 32½ miles and made four service stops.

POPE MOTOR CAR CO., No. 11—Route 8—Left 8:17 a. m.; returned 3:35 p. m.; load for the three trips 978 pounds, 500 pounds and 150 pounds respectively; covered 28½ miles and made thirty-seven service stops.

POPE MOTOR CAR CO., No. 12—Route 6—Left 8:15 a. m.; returned 5:45 p. m.; five trips with merchandise; covered 29½ miles and made thirty-one service stops.

LANDSEN MOTOR CAR CO., No. 13—Route 4—Made trips out; no record of return.

ELECTRIC VEHICLE CO., No. 14—Route 7—Left 8:30 a. m.; return 6:45 p. m.; load gen-

eral merchandise; covered 28½ miles and made thirty-four service stops.

ELECTRIC VEHICLE CO., No. 15—Route 15—Left 8:45 a. m.; returned 6:10 p. m.; load 4,300 pounds fish; covered 32 miles and made twenty-one service stops.

CANTONO ELECTRIC TRACTOR CO., No. 16—Route 12—Left 8:10 a. m.; returned 5:20 p. m.; load 2,250 pounds of merchandise; made five trips and thirty-five service stops; one load 1,500 pounds.

FISCHER MOTOR VEHICLE CO., No. 17—Route Flushing—Left 6:11 a. m.; arrived Flushing 7:59; arrived back 3:00 p. m.; load 2 huge heads, 37 half-barrels, 6 quarter-barrels beer, 9,600 pounds in all and four men; covered 22 and made 24 service stops out; covered 22½ miles back.

CHARLES ROCKLIFF, No. 2—Route 3—Left 7:53 a. m.; returned 6:30 p. m.; load general merchandise; covered 43½ miles; and made forty service stops.

KNOX AUTOMOBILE CO., No. 4—Route 9—Left 8 a. m.; returned 5:55 p. m.; load merchandise; made four trips; covered 40½ miles and made fifty-seven service stops.



MOTOR AGE

IN THE EXPRESS STATION TO RECEIVE LOADS

# MOTOR AGE

Published Every Thursday by  
THE TRADE PRESS CO.

**1303 MICHIGAN AVENUE CHICAGO**  
Telephone Calumet 7011

New York Office, 114 West 19th Street,  
London Office, American Publication Bureau,  
39 Manor Park Rd., Haringey, N. W.

RECEIVED  
MAY 10 1911  
MOTOR AGE

RECEIVED  
MAY 10 1911  
MOTOR AGE

RECEIVED  
MAY 10 1911  
MOTOR AGE

Entered at the Chicago Post Office as Second  
Class Mail Matter

**Subscription, Two Dollars per Year**  
Foreign Subscription, Four Dollars

Any Newsdealer may obtain Motor Age through  
the Western News Co., Chicago, or any  
of its branches, on a reliable basis

## TO THE TRADE

EVERY few days MOTOR AGE receives from members of the trade cuts which accompany requests for illustrated descriptions of articles which are being introduced or have at some time or other been introduced. Without touching upon the demand which the trade makes upon trade papers for descriptions of the goods of the trade and for the general booming of goods in the reading columns, MOTOR AGE asks of the trade that it refrain from sending cuts.

Whenever MOTOR AGE describes anything it makes cuts especially for the purpose and according to the style of engraving used regularly in the paper. It never uses other cuts. Send photographs, drawings, or other illustrations from which MOTOR AGE may make its own cuts in its own style, at its own expense.

There is no charge for cuts so made. All of the cuts used in the paper are carefully filed, as well as all of the cuts belonging to advertisers and used in advertisements in the paper.

These two files are large, and MOTOR AGE cannot take upon itself the keeping of a third file for cuts sent unsolicited to it to be used with descriptions. Hence it does not pretend to file these cuts to be responsible for them, or to return them.

While MOTOR AGE presumes that many who send such cuts do so in the desire to save MOTOR AGE the expense of making cuts for the purpose, and, if such be the case, is not ungrateful in the matter, it much prefers that no cuts whatever be sent to it except those for advertising purposes.

## "APOTHOSIS OF SUPINENESS"

A NEW phase of the automobile regulation has been discovered by one James W. Walker, of Coldwater, Mich. It is much too interesting an example of prejudice to be restricted to Coldwater publicity. Here it is as it appeared in the local newspaper:

MY DEAR EDITOR: We read a communication in your paper of Tuesday on the rights of auto drivers, signed "One Who Has Discussed the Subject." We should be pleased to have the person with the assumed literary name, of tragical dimensions, come out in the clear and let us know who you are and who you have discussed this subject with that we may know more of the fal-

lowness of your argument. I am prompted to say unto your correspondent, who has seen fit to rush into print to bolster up a selfish cause, that there is no legislation needed to control automobiles. The fundamental law of the land is sufficient. They have no right of way upon the highways of the nation as yet. In this state thrasher engines have been given the right of way under right restrictions, but automobiles have no privileges, and this is true so far as I know of every state in the union. To run an automobile lawfully, right of way must be obtained, and until that is done they are trespassers, which it is so citizen's right to remove when they interfere with legitimate and lawful traffic. When they menace the life and property of a citizen he is 'n his right to protect himself. Not only his right, but his duty. Citizens who can be driven from the highways which they own by trespassers are not in need of more law, but more courage. When the legislatures of the various states give automobiles right of way over all highways a citizen would incur some risk in interfering with them, but not now.

Let any citizen refer this question to a lawyer whose reason is not impaired by autocrism, do locomotive railways invade a country without right of way? Do electric cars invade the streets without a franchise? Autocars—automobiles. If you will—are simply engines in the hands of the irresponsible many, and should be sternly suppressed by the citizens they menace. They are more dangerous upon the highways than a rabid dog, a wild bull or a Texas steer, and to permit one of them to crush, maim and destroy is the apotheosis of evilness. The road riders need no law: the autocracies need the law, as they are now using our roads unlawfully.

Mr. Walker would be easily answered did his effusion deserve an answer. Colonel Pope's truism would be apt: "The roads are made for man, not for horses. Man may use them to his best advantage." But while no one cares what the Coldwater motorphobe thinks, the very fact that such prejudice as his is a fact, not a joke, and is abroad in the land, leads naturally to the conclusion that automobilists have much need of concerted, conservative action in national organization.

## CLUBS AND TRADE

SEVERAL of the French local automobile clubs have formed co-operative purchasing agencies for the benefit of members. Automobile appliances and sundries are purchased in lots at wholesale prices and kept in stock at the club. These goods are sold to the members at cost. The club is virtually a co-operative store.

This is a good thing—for the club members. It is not just to the trade and it is not necessarily to the advantage of the club as a whole.

An automobile club has other purposes than those of conducting a store. If it has not, it becomes a store pure and simple in which the price of membership is the profit on the goods sold. If the club pretends to be a club in fact as well as in name, it has other objects in the way of securing benefits for its members than that of serving as a purchasing agent in competition with legitimate stores.

Just now the automobile clubs all over the world are a part of a great movement to place automobilists and automobilizing upon an equitable footing in their final reckoning with society in general. This is the work of the club.

The play of the club is to promote automobilizing for pleasure, pastime and sport. The work and the play of the club are much the same. One reacts on the other.

To remedy wrongs, to secure redress for unjust action, to suppress detrimental sentiment, the club has much work in the benefit of its members. To innuigate or assist in movements which tend toward greater con-

venience and pleasure in automobilizing the club has ample scope for its activity.

It is a useless task to take upon itself the burden of store keeping. The co-operation, not the enmity, of the dealers is needed by clubs.

At this stage of automobilizing the tradesmen can be of great service in nearly all of the many phases of club endeavor. They carry a certain power just as much as do the clubs. This strength should be joined with that of the clubs.

If dealers seek to practice extortion upon automobilists it is right enough for the club to aid its members by seeking to stop such practice.

It is an entirely different thing for the club to establish itself in the community as a common price cutter, a perpetual bargain sale. Even extortion practiced by dealers here and there will wear itself out naturally with the development of the trade.

Competition, the great evener, will place the selling of motor car goods upon the same basis as that of ordinary mercantile practice. There will then be no more reasonable excuse for a club running a cut rate spark plug store than for running an "at cost" piano emporium, or, in fact, a general department store.

## RURAL REPARTEE

A N UNENLIGHTENED citizen of La Rue, Ohio, who has not as yet learned of the many virtues of the motor car, burst into print a few weeks ago with a diatribe against the automobile and all people in any way connected with it. Among many other brilliant thoughts that fell from his pen—or pencil—was one to the effect that automobilists discouraged church-going on the part of the rural population because the farmers were afraid their horses would scare at the "hideous things" and cause trouble. He advised that automobiles be banished from the country and automobilists generally be hanged. The owner of a runabout in the village became incensed at these inflammatory words, and in the next issue of the village paper came back with a scorching communication that fairly sizzled when it touched the paper. He said that if the writer of the first communication would look after his own morals a little closer, go to church himself occasionally, quit sitting on store boxes at the corner grocery while his wife was splitting kindling, and otherwise conduct himself as a gentleman and a scholar, he would do more good to the community than he did when spending his time writing letters of complaint to the local paper, to which he had probably not paid his subscription. And the end is not yet!

## A. M. L. A. A. MERGER

THE American Motor League and the American Automobile Association are to be consolidated. At a meeting of the directors of the latter association on Tuesday, terms of merger were accepted and a committee was appointed to co-operate in the drawing up of a constitution and by-laws.

This is a welcome action. The peculiar condition of automobilizing affairs in this country does not warrant opportunity for division of interests. Motorists of America must stand before the nation as a solid phalanx.

Whatever might be the usefulness of each of the two separate organizations there is no doubt that this usefulness can be greatly augmented by their formation into one larger and stronger body.



## JUMP

With spring on tap all the dinky little gasoline launches afloat will now become automobile boats.

With

London doctors have discovered "motorpatha cerebralis," second cousin to sea sickness, and contracted by motoring. It takes a doctor to make new business for himself.

With

The weather man was liberally cursed all during March, and alternately cursed and blessed during the seven days of April. He has a chance now to settle down to receiving a full and continued line of blessing.

With

An Ohio newspaper says that it has noticed from magazine advertisements that there are at least twenty concerns manufacturing automobiles and that hence there is bound to be overproduction and a 50 per cent drop in prices. This is great, coming from a neighbor of Cleveland.

With

The strenuous life is that of the automobile manufacturer. He goes to the New York show in January and sells his entire output for the season. Then he hustles back to the factory, spends two weeks doubling its capacity and rushes to the Chicago show to sell the new half of the doubled output. During the week between the Chicago show and the Detroit local show another wing is built onto the shop, which is already larger than anything on earth, and the energetic maker then goes the rounds of local shows at Detroit, Buffalo, Cleveland, Boston and Washington. On the



way back home he spends an idle day in the buffet car figuring out that at these shows he oversold the new third of his trebled output, and so upon his arrival at home he immediately calls his executive staff and the contractor into private conference at the hotel and orders—a drink.

With

It is reported by a German paper that in some parts of the country the feeling against automobilists is so pronounced that school children are taught sentences like the following: "There are many people in the world besides automobilists."

With

This is certainly A great industry, for in organizations we have the A. M. L., A. A. A., A. C. A., N. A. A. M., A. L. A. M., A. A. E. A.,



## GRAND ROADS IN RUSSIA

There are three kinds of roads in Russia—the chaussee, the postal service route, and the common highway. To the automobilist the latter two are of little interest, as they are despicable, and even huggy riding on them is sometimes impossible.

In general the chaussees are wide, well cared for and generally straight roads, and which seem endless. Very few public places are to be found along them and subdivisions are almost unknown. There are many other roads which cross them, but a chaussee seldom subdivides itself. Banners and posts are to be found at almost all crossings and squares and their inscriptions are plain, detailed and easy to be understood, a feature which some of the more civilized nations might copy.

Villages are a scarcity along the chaussees, while important towns are often hundreds of miles distant. A trip along these roads will not

reveal much interesting scenery and the tourist who imagines he will find Swiss landscapes, French valleys or German rivers will be greatly mistaken and disgusted, because nowhere, except possibly in a desert, will he find so little sign of life and see so few houses. The people live near the postal routes and the common highways, but seldom near the chaussees.

Few dangerous grades are to be met, and in many parts of the country there are stretches of road many miles long on which a speed of 60 miles per hour can be kept up for several hundreds of miles. All that is necessary for the driver is to previously go over the road and get acquainted with the very few points where he would have to turn.

During May, June and July the nights are so clear that it is not necessary to carry lamps. People can read newspapers all night and photographing is done at 2 and 3 o'clock in the morning. The winter months are, on the contrary, dark, and it is necessary to light up at 3 in the afternoon; the night's extreme blackness

## SPARKS

A. P. A. M. A. and N. A. H. A. D., while the consolidation of the A. M. L. and the A. A. A. gives us the A. M. A.

With

By the time several thousand automobiles have toured through Illinois to the St. Louis fair there ought to be pretty fair roads in the Sucker state.

With

The Chicago daily papers have taken to publishing automobile numbers. The local tradesmen have grabbed their cheek books and taken to the woods.

With

With an American young lady driving a 165-horsepower car Madame du Gast will have to hunt up a good press agent to hold up her own end of the game.

With

It is not so much to the point whether we call it the James G. Bennett cup race or the Gorion Bennett race as it is whether or not we have a show to win it.

With

Those Washington dealers who marooned a bogus purchaser in a dismal locality 24 miles from town to cure him of "grafting" demonstration rides might also try the same cure on troublesome village marshals.

With

A fair-minded horse owner of Coldwater, Mich., says he is tempted to drive his horse in behind an automobile going 30 miles an hour just to see if any constable will try to regulate his speed. Probably the horse would therefore side with speed regulations of all kinds.



WINTER MORNING IN RUSSIA ALONG GREAT BREAK-FAST ROADS



# IT IS NOW THE A. M. A.

## The American Motor League and the American Automobile Association Merged Into the American Motor Association—Whipple President and Potter Secretary—The Plan of Amalgamation

New York, April 5—The long discussed possibility of the consolidation of the American Motor League and the American Automobile Association has become substantially a fact. At the meeting today of the A. A. A. a vote was taken which favored the amalgamation with the league according to the terms of merger sent to the association today by the league. Samuel Butler and Emerson Brooks were appointed to constitute the association's committee on constitution and by-laws.

At the meeting there was some opposition to the amalgamation, but the arguments presented in favor of it by President Whipple and W. E. Scarritt finally prevailed. Mr. Scarritt in talking on the subject said in part:

"There seems to be no good reason whatever why an amalgamation of the American Automobile Association and the American Motor League should not take place. On the other hand, there are many reasons why it should. In union there is strength. It has been felt for some time that the older and stronger each organization becomes the more difficult it would be to bring them together. The chief thought in deliberation on this subject has been what is best for the organization of automobilists as a whole and what plan may be carried out that will bring the automobilists of America together into one clan—a strong, healthful national organization. If the plan outlined shall become operative I believe it will mark a real letter day for automobilism in America."

The president, executive board and the chairman of the standing committees of the American Motor League had already given their approval of the plan that had been outlined by the conference.

The terms of amalgamation were framed and agreed to by a joint conference committee, which has been holding sessions for the past two months.

At these meetings President Potter and Frank A. Egan, chairman of the membership committee, have represented the A. M. L. and President Scarritt, of the A. C. A., and President Farnon, of the Chicago Automobile Club, were appointed by President Whipple to represent the A. A. A. President Whipple and Treasurer Farrington, of the latter body, were present at some of the meetings. Each side agreed as to the advisability of there being but one national body, and each showed a readiness to make concessions.

Under the agreement of merger President Whipple is placed at the head of the new body and President Potter, as secretary, will undertake the organization and recruiting work. It is no secret that each side wished the other's president to fill the office finally allotted him. The other offices are evenly distributed. There will be a board of directors of ten members from each organization. It having been left to the A. A. A. to choose between Secretary Gillette and Treasurer Farrington for the treasurerhip, the latter was selected, Gillette withdrawing on account of private business interests.

The present racing board will remain intact, and will not only maintain control of automobile racing but will assume absolute command

of all motor boat speed contests in America.

The full terms of the merger are set forth in the following statement, which President Whipple and Messrs. Scarritt and Farnon presented and asked to be accepted and given out to the press as the official promulgation of the agreement reached by the conference:

The opinion has been commonly expressed that the automobilists of America should be united into one body, and that such body should be maintained for the useful and militant purposes which all friends and users of the motor car now seek to effect. Sharing in this opinion and believing that in no way could their efforts for the common good be more worthily directed, the managing boards of the American Automobile Association and the American Motor League have, through their representative committees, held joint conferences at which the subject of merger has been discussed in a most amicable spirit and a plan for uniting these two national bodies finally prepared for submission to the individual members. Such plan has been approved by the executive boards of both organizations and the assent of the membership at large is now requested in order that the merger may be completed and the work of the united body set in motion as promptly as possible. The plan of merger is as follows:

1.—The name of the united body formed by this merger shall be the American Motor Association.

2.—The official year of the American Motor Association shall be fixed by the constitution and by-laws to be adopted as hereinafter provided. The officers of the American Motor Association to serve during the balance of the present official year shall be as follows: President, Harlan W. Whipple; first vice-president, Charles E. Duryea; second vice-president, William H. Hotchkiss; third vice-president, A. P. Fleming; secretary, Isaac B. Fugate.

3.—The general management and control of the affairs, funds and property of the united body shall be vested in a governing board, to be composed of ten directors to be appointed by the A. M. L. and a similar number to be appointed by the A. A. A. The directors so appointed shall include the officers named.

4.—The racing department of the A. A. A. including its several appointees shall be in no manner affected by this merger, but shall remain and continue in operation under the authority of the A. A. A., subject only to such amendments if any, as may hereafter obtain force.

5.—A department of organization shall be formed and maintained for the purpose of enlarging and strengthening the united body and of directing and encouraging its effective work in various departments. This department shall be placed in charge of the secretary, who shall act as manager thereof under such arrangements as may be deemed best for the effective upbuilding of the association.

6.—In all cases where the two component bodies to this merger have national committees bearing the same title or similar titles, such committees shall become and operate as one committee for the balance of the present official year. Other committees of the A. A. A. and A. M. L. shall continue their duties as heretofore with the exception of the racing committee of the A. M. L., which is now discontinued.

7.—A committee consisting of two members selected from the present membership of the A. M. L. and a like number selected from the present membership of the A. A. A. shall prepare a constitution and by-laws to serve the purposes of the united body and shall present the same to a governing board for its adoption. The constitution and by-laws so adopted shall remain in force until amended or superseded at a regular or special meeting of the united body upon due notice. Such constitution and by-laws shall among other things, make due provision for the continuance of clubs, local organizations and individual membership in the American Motor Association and shall har-

monize as closely as practicable with the constitution and by-laws of the A. A. A. and A. M. L. as framed prior to the merger of the two bodies.

8.—This memorandum shall be submitted to the various local bodies and members contained in the merging organizations for assent and approval, and a two-thirds affirmative vote shall be deemed sufficient to ratify the plan of merger herein set forth. The assent or objection of each member shall be taken by a mail vote, and for that purpose a communication plainly stating the terms and purpose of the proposed merger shall be submitted to each member, and after a lapse of 15 days from the mailing of such communications members not having replied to the same will be deemed as in favor thereof.

## GREAT CANADIAN ROAD SCHEME

Toronto, Ont., April 1—The first annual banquet of the Toronto Automobile Club, held in the National Club, was a red letter event for the club and a delightful introduction to the tardily opening season. Covers were laid for sixty and the club officials outdid themselves both in the decoration and the good things provided. Considerable disappointment was felt that Judge Hotchkiss, of Buffalo, and the other American officials invited were unable to be present, but their genuine letters of regret, along with others from W. K. Vanderbilt, Jr., Henri Fournier and a code telegram by command of his majesty King Edward, from Henry Petrol Hawkins, chauffeur in extraordinary to the royal garage, brought down the house.

"Our Country" brought out eloquent speeches from E. B. Ryckman and Messrs. Stratten and Marshall. "Our Sport," from President Doolittle, toastmaster, and responses from the boys who knew, Messrs. C. Gurney, William Hylop, Jr., E. R. Thomas, Buffalo, and G. H. Goodham. Vice-President W. A. Kemp launched "Our Highways," and Road Commissioner Campbell gave the talk of the evening. In a half hour's address he sprang on the club his latest scheme, a national demonstration highway or boulevard starting at Fort Erie, opposite Buffalo, following the Niagara river to Niagara Falls, then skirting around the head of Lake Ontario, through St. Catherine's and Hamilton to Toronto, and then away north into the Muskoka lake district, that paradise for summer tourists already being found out.

## CONFERENCE WITH PART MAKERS

New York, April 6—At the meeting today of the executive committee of the National Association of Automobile Manufacturers all of the members were present except M. L. Goss.

The first action taken was the appointment of a membership committee, consisting of S. T. Davis, Jr., W. H. Chapin and G. W. Bennett. The committees on show dates, freight rates and the exhibit at the St. Louis world's fair reported satisfactory progress. The St. Louis committee stated that the association's collective display would be completed April 15.

D. J. Post, president of the Automobile Parts and Accessory Manufacturers' Association explained the objects of the new organization to the executive committee and it was arranged for the show committee of the parts makers' association to confer with the show committee of the N. A. A. M. to endeavor to provide better representation of the parts people at shows if possible.

Mr. Chapin offered a resolution opposing the Southard bill compelling the adoption of the metric system, on the ground that such a course would cause a great up-setting of the present standards in machine tools and all manufacturing machinery. It was adopted.

## PESSIMISM IN THE EAST

### Discouraging Reports Concerning the Progress in Construction of the American Team Cup Race Candidates—Ormond Trials May Not Be Held—Oldfield and Housman Suspended

New York, April 4.—With the Sampson car declared out of it altogether, conflicting reports and dark hints that frequent changes by the designer will also prevent the Hewitt racer from being completed in time, and by no means undoubted assurances from Cleveland so far as no doubts dispurses go that even the Peerless trio of speeds machines will be ready by April 15, pessimism as to America's reputation in the international cup race this year has at present the upper hand. There are those who prophesy openly that there will be no trials at Ormond and, in fact, no American team at all in the great race.

Mr. Hewitt refuses all information as to the progress he is making with his car and it is repeatedly stated that he has made so many changes in his construction that he has put back its completion so far as to leave little hope of its being ready in time.

A recent Cleveland news dispatch speaks of but one car as likely to be ready, and Joe Tracy, who is to drive the Peerless, should but one be chosen, does not speak of more than two to be ready for the Ormond trials. Of the one Peerless alleged to be sure of completion, it is said that its weight will be between 1,600 and 1,700 pounds, that it will be built very low, that it will be pointed in front like the prow of a yacht and that it will develop over 60 horsepower.

Assuming that the Ormond trials will take place as scheduled, another question has arisen with reference to the various trials for records, announced to be made by outside cars at the time of the American team tests. Secretary Butler suggests that these outsiders take the precaution to secure record attempt sanctions or have the Florida East Coast Automobile Association apply for them, as the club's trials are private affairs without authorization to take official times for record breaking attempts. By way of reply to this suggestion, it is urged that the A. C. A. should obtain a record trial sanction that the American team candidates should not be robbed of any records they may make. It is pointed out that records at least for distances over 50 miles are sure to be established and further suggested that it would be a graceful courtesy for the club to obtain a sanction and invite all hands to make record trials. The club, though, does not seem particularly anxious to have outsiders intrude, though it does not dispute that the bench is free for all at any time. "Senator" Morgan, the local manager of the Florida association, is not in favor of his organization asking for a sanction, stating that it would prefer that all record breaking attempts should be deferred until the meet next January, or at least until the Florida colonists, who make up a great part of the association's membership, return to the bench next winter.

Exploration of Nassau and Queens counties by Chairman Pardington and other racing enthusiasts prove that Long Island within its limits can furnish half a dozen available courses for the Vanderbilt 200-mile cup race, to be run late this summer or early in the au-

tumn. Mr. Pardington went over a 50-mile triangle recently, which struck him as notably favorable for the course. It starts from a point beyond New York city limits, outside of Jammien, on the Jericho pike, turns to the right and over a good but little traveled road paralleling the Merriek turnpike to Freeport, thence across the island to Roslyn, thence up and down the north shore hills to Jamaica, or rather the point outside Jamaica already suggested as a starting point. This gives two long, level stretches and one over not too strenuously rolling hills.

There seems little likelihood of the A. A. A. failing to get the necessary permission from the Nassau and Queens county authorities. With such a grand opportunity for an international contest and considering the fact that the cup donor himself so far has confined his speeding to imported cars, there seems little chance that the A. A. A. will decide to limit the contest to American-made machines.

Claudio Fogolin, who with Lancia and Storero, are claimed here to have been selected to drive the three Fiat Italian cars in the international cup race, arrived here by the Touraine on Saturday. Hollender & Tangeman, importers of the Fiat, have engaged him as superintendent of their garage. A 60-horsepower Fiat, a counterpart of the three cars to be used by the Italian team in the Hornburg contest, is on the Kensington, which is due here this week. It is Mr. Tangeman's intention to take Fogolin and the car to Ormond for a try for the records at the American team test and if possible to send them to compete in the Commonwealth avenue hill climb, Boston, on April 10, though the Ormond trials would seem on the present schedule to interfere with this Boston pilgrimage. Fogolin will return to Germany in time for the big race and come back to New York at once, so as to drive the Fiat racer at the track meets. During his absence Mola, another Italian driver already here, will take his place in the races.

#### OLDFIELD DISQUALIFIED

New York, April 5.—At the meeting today of the racing board of the American Automobile Association Barney Oldfield and E. C. Housman were disqualified indefinitely from further racing on account of competing in unsanctioned track races in the southern cities this winter. As this disqualification holds until the board sees fit to remove the suspension, race tracks throughout the country will be refused sanctions for meets unless they enforce the disqualification of Oldfield and Housman.

It was also voted by the board to change the racing rules so that the classification of cars instead of being by 1,000-pound, 1800-pound and unlimited classes should be by the French system of classification in order that there might be an international uniformity in the establishment of records, etc. Hence the classes will be as follows: First class, cars weighing from 650 to 1,000 kilograms; second class, cars weighing from 400 to 650 kilo-

grams; third class, cars weighing from 250 to 400 kilograms; fourth class, cars weighing from 50 to 250 kilograms.

The board voted to assume the control of motor boat racing and declared itself to be the sole authority in America for the regulation and control of contests among strictly high speed motor boats, such as are commonly known as automobile boats. Boats must be registered with the board and races must be sanctioned. A set of rules to cover this style of racing is in the course of construction. Lieutenant Hall was appointed official measurer and H. L. Little official engineer of this branch of the sport.

#### NO SPEED IN SYRACUSE

Reckless automobilism is not to be tolerated in Syracuse, N. Y., during A. C. Forbes' term as mayor. Two accidents occurred last week Tuesday. In one Health Inspector Benjamin Murfitt was driving, when an automobile ran into his carriage and he was thrown out and slightly injured. The second accident occurred shortly after the first, when a small child was run down and barely escaped serious injury. The reports of the accidents had no sooner reached the office of Mayor Forbes than he directed a letter to Commissioner of Public Safety Bowen, who took immediate action upon the communication, sending a copy of it to Chief of Police Wright with instructions that the ordinance be enforced. It restricts the speed to 8 miles an hour in the streets and to 5 miles an hour in turning corners. Inside the 1/2-mile circle the speed is restricted to 6 miles an hour. Mr. Bowen also notified President Brown, of the Automobile Club of Syracuse, of the position taken by the department, as Mr. Brown had previously requested if the matter was to be taken up. Mr. Brown assured Commissioner Bowen that the club was favorable to the proper regulation of speed and the enforcement of ordinances against persons violating it.

John B. Costello's negligence action against the B. M. Corwell Co. to recover \$1,000 damages for injuries alleged to have been sustained on November 19, 1903, when he was run down by the defendant's Oldsmobile, was partially tried in the municipal court last week, when it was withdrawn and an action immediately commenced in the supreme court. In this suit damages in the sum of \$5,000 are asked. The trial in the municipal court went on without a jury, and after learning what the evidence was the plaintiff's attorneys found themselves prepared for a supreme court action, and thus filed the suit here.

Supreme Court Justice Andrews Saturday granted an order to show cause why John J. Brady, temporary receiver, should not be appointed receiver in the voluntary dissolution proceedings brought against the Central City Automobile Co. by Myron C. Blackman and Charles Lee, a majority of the stockholders. The liabilities are \$3,200, with no assets.

Mayor Forbes, in response to a request from the National Good Roads Association that he appoint a committee of five citizens to attend the annual convention of the association in St. Louis May 16-21, has appointed Robert E. Gilman, chairman of the good roads committee of the board of supervisors; Frederick B. Parker, a member of the same committee; W. L. Brown, president of the Automobile Club of Syracuse; Louis Will and George S. Larrabee, the latter an automobile enthusiast.

## GRAND MEETING AT NICE

**Royal and Fashionable People Gather for the Opening of the Continental Automobile Season—Touring Events Inaugurate the Tournament—Records Broken**

Nice, France, March 24—If one asks a Frenchman about Nice, he will answer: "Ah, monsieur, c'est le paradis de la France." A German will invariably say it could not be more beautiful, while an American who has traveled a great deal will surely be of the opinion that there are very few, if any, other places on earth where climate, natural beauty of scenery and accommodations offer a more pleasing ensemble even to the most exacting tourist. If every pleasure-seeker or rather tourist, could afford the expenses incurred by a stop of some length in Nice, this town would soon become the gathering point of motorists from all over the world.

But even now Nice is filled with thousands of cosmopolitan people and here you hear more names of nobility in an hour than during a week in any other resort or bathing place on the continent. Nice is not exactly like Vichy or Spa or Homburg, where people generally go to follow a cure—it is rather like Ostend, Trouville, and Dieppe, a resting place for the smart set and a spending place for the rich. It is the exclusive place, and it is really very extraordinary when some half dozen members of royalty cannot be found here at one time.

Since Tuesday the city has been in the hands of the automobile fraternity and automobilism is the topic wherever you go. The annual Semaine de Nice was inaugurated that day in the shape of a tourist run, which let it be known at once, was very successful. The itinerary was as follows: Nice, Cannes, Venice, Coursegoule, Bouyon-Ics-Terres, Consegus, Roquestron Sigale, La Penne, col de Saint-Raphaël, Puget-Théniers, where dinner was served, thence to Thouet, de Beuil, Levens Toutette and back to Nice; all told about 112 miles. There were thirty-one cars entered for the run, but only twenty-one started, the first of which was sent away at 6 o'clock in the morning and the last at 8:36. The first car to return reached the starting point at 3:38 and the nineteenth at 4:19; two cars withdrew during the run. No classification was made, as the condition of the trip was that the cars could go as they pleased but had to get back

within a certain time. The majority of the party remained bunched the greater part of the trip, which made it the more pleasant. The following took part in the run: Parran, 40 horsepower Berliet; Garin, 16 horsepower Rochet-Schneider; Guoyraud, 14 horsepower Renault; Prince Lubocki, 60 horsepower Mercedes; Rosset, 20 horsepower Pilaïn; De Milo, 14 horsepower Renault; De Martini, 16 horsepower Martini; Ernest Cuenod, 16 horsepower Martini; Clerissy, 16 horsepower Rochet-Schneider; Blane, 8 horsepower de Dion-Bouton; Marcel Cole, 20 horsepower Pilaïn; D'Arco, 24 horsepower Neue Automobil Gesellschaft; Thorand, 8 horsepower de Dion-Bouton; G. Liebard, 10 horsepower Peugeot; Etienne Giraud, 40 horsepower C. G. V.; Guidi, 14 horsepower Renault; Barillon, 12 horsepower Mors; Pribic, 16 horsepower Rochet-Schneider; A. Gauthier, 8 horsepower de Dion-Bouton; Thyssen, 16 horsepower de Dietrich and Durandy, 8 horsepower Renault.

Yesterday was again touring day, but in addition to a run over a road about as long as that of the first day's excursion, there was a hill contest which took place over a stretch of the road considered the most difficult around this part of the country. The run itself, which was made over the classic road called Nouvelle Corniche, and the Esterel, was much more difficult than the one which had been selected for the first day's test. The competitors of the previous day's run were all there for the start, which was made under the most favorable weather conditions. All except one finished the journey, and the single exception was caused by a tire accident during the hill-climbing test.

The speed contests will begin Monday, when the mile and kilometer events will be run, as

well as the Rothschild cup race over a distance of 1 kilometer. The number of racing machines entered for these contests is not so great as during previous years, due principally to the preparations for the big race of next June. This will not prevent some fast times being made, as the swiftest racing monsters at present on the continent will be seen. Mercedes, Gobron-Brillie and Napier cars, which are claimed to have from 80 to 110 horsepower motors, will be in battle royal with such men as Edge, Jenatry, Baron de Caters, Rigolly, Brann, Werner and others in the seat. All told there are nineteen entries for these events up to date.

Few people can imagine how long it took the organizers of the meeting to obtain permission for the races from the prefect of the state. This official did not wish to take the responsibility for accidents like the one which caused Count Zbrowsky's death last year, and for many weeks refused to grant the permission. Only an appeal from some of the most influential members of the Automobile Club of France and tradesmen of this city overcame the opposition.

One of the first acts was an order prohibiting the La Turbie contest, on which road last year's accident happened. In vain did motorists point out that this was one of the most interesting features of the meeting, but their appeals were of no avail.

NOTE—According to a cable advice Rigolly on a 100 horsepower Gobron-Brillie car, intended to be used in the French eliminating race, covered a mile standing start in 53.35 and a kilometer, flying start in 25.34 at Nice, March 31. The latter time was made in connection with the Rothschild cup race.—E.V.

### CUP RACE FEATURES

Mr. Tampier, timekeeper of the Automobile Club of France, was sent over the French team trial race course to make report of its condition and reported that two localities should be neutralized, Retbel and Vouziers, and that there should be five obligatory stops of 60 seconds



PROMENADE DES ANGLAIS AT NICE



THE HOME OF THE AUTOMOBILE, PARIS, N.Y.

each at different dangerous crossings and turns. All told during the race 105 minutes should be required in stops. In general the road is in good condition and the few stretches which are really dangerous will be remedied to as much as possible. About 22 miles of wire fences will be necessary to close the crossings along the route. It was suggested by Tampier that a man be placed on each side of the road every 100 meters, while at crossings and in village gendarmes be added for its service, which will require about 3,500 men.

The Fiat company, of Italy, besides having ready three 65-horsepower racing machines, is also building three 105-horsepower cars, which may be used in the cup race. It will depend upon the conditions of the road as to which will be piloted by Vincent Lancini, Louis Storero and Georges Cagno, the three drivers which the company has finally selected for the running of its cars.

The German trial race will be held during the earlier part of May on a Sunday, and the start will be given at 5 o'clock in the morning. It is stated that fewer people will see the race Sunday than any other day, because the people generally go to church. So far only two manufacturers have given assurance of their participation, the Benz company and the Opel-Darracq company.

Mr. Jellinek, of the Mercedes company, said in a recent interview that the Cannstadt public defenders would not be shown to the public and would not take part in any meeting before the race, and, contrary to reports, the 80 and 24-horsepower cars which took part in the Nice meeting were not the machines intended for the Triunfos race.

The German Automobile Club has decided that if the cars which are to take part in the eliminating trials do not show sufficient speed the Mercedes company will be allowed to enter three of its cars for the race.

It has been decided that during the French eliminating race no one will be permitted to cross the road unless a gendarme accompanies him. All the turns will be either oiled or tarred and the entire road will be swept before the race, for the purpose of doing away

with the dust, which was the cause of many previous accidents in races. A banner will be fixed across the road near every turn and at all dangerous points. There will also be put up large pieces of cloth, on the outside of turns, thus enabling the driver to know where he may turn without danger. All crossing roads will be barred by poles carrying large banners across the street. The start is likely to be given about half a mile from Flize, in the forest. This would prevent the usual big crowd at the start of a race which often occasions confusion. The finish will take place between Flize and Faisceaux.

#### "AUTOMOBILE WEEK" AT OSTEND

The annual "automobile week" meeting at Ostend, Belgium, has been set for July 15 to 21 by the Automobile Club of Antwerp. During the two first days touring events will take place; on July 17 the kilometer and mile races will be run. The 50 kilometers race will be held the following afternoon, while more events for touring cars will be held July 19 and 20. A flower parade and battle will end the week's meeting July 21. The total value of prizes will reach \$5,000. Three days later the annual week at Spa will begin, with the Spa-Malchamps road race in the morning and the mile hill climbing and the race for the Spa cup in the afternoon. July 25 a 100-kilometer motor cycle contest will be run, while different contests for touring cars, a flower parade and a competition for brakes and tires will complete the program for the remainder of the week.

#### ITALY'S RELIABILITY TRIALS

The Italian Automobile Club of Milan has arranged a reliability and endurance contest, which will last 5 days, starting May 11. The daily run during 4 days will be over different routes, about 125 miles long, while a hill-climbing contest is scheduled for the second day.

There will be five classes of vehicles: First,

two-seated cars, with a load of 330 pounds; second, four-seated cars with a load of 660 pounds; third, four-seated cars with a load of 990 pounds; fourth, six-seated cars with a load of 1,320 pounds; fifth, teams of three cars of the same pattern and from the same manufacturer. The weights given are minimum and any amount may be added. Each vehicle will be provided with all necessary tools for repair purposes, for in case of need of repairs they must be made with the tools carried in that particular car and by the men riding in it. A pilot car will lead each day's run and any competitor passing this will be disqualified. The time limit will be based upon an average speed of 10 miles per hour for the two-seated cars and 13 miles for the others. In case a car is delayed the operator must not drive faster than the legal speed limit. Each competitor will receive a book, in which will be noticed the time of the start, arrival, fuel furnished at the start of each day's run, weight of the passengers and dead load.

#### 1000-MILE NON-STOP RUN

An interesting test was made about a fortnight ago in England by J. T. Overton and R. Brown with a 24-horsepower Georges Richard car. The intention of the test was to establish a 1,000 miles non-stop engine record, and for this purpose the automobile club appointed C. Stevens and P. Straight as official timekeepers and observers. A road leading to Nottingham was chosen for the test. When 35 miles from London a bulldozed cow suddenly appeared on the road and refusal to move. The occupants of the car were compelled to step out and chase her away. A new start was then made, the distance covered until this incident occurred not being taken into consideration. No more cows were met after this and the run was completed without trouble. The route to Nottingham had to be covered four times, Overton and Brown taking charge of the machine in turn. Only 7 pints of water were consumed during the entire run.

# LONDON'S LAST EXHIBITION

**The Display in Agricultural Hall Under the Management of Messrs. Cordingley Closes a Season of Great Show Activity—Is Representative But Exhibitors Are Mainly Dealers**

London, England, March 26—The Cordingley motor car show at Agricultural hall, which opened last Saturday, concludes London's program of automobile exhibitions for this season. Coming long after the other shows and without the sanction of the Society of Motor Manufacturers and Traders, although with the more or less commercially-obtained backing of the Automobile Club of Great Britain and Ireland, it would seem to be a rather discouraging proposition. This, however, is not the case.

The show is not so large or complete as that held earlier at the Crystal palace, but it contains an extensive line of cars and appurtenances and is given a goodly attendance. About three-fourths of the cars shown have been previously displayed, but the public seems to be well enough interested in automobiles to turn out a wide representation at even a late show.

Most of the exhibits are those of agents, the makers not being directly participants. But inasmuch as the agents show the same cars that the makers would show were the exhibits by them, the public is little affected by this particular phase of the show, and the exhibition becomes, if not a traders' mart, an excellent show for selling cars directly to the user. It is what you Americans would term a big local show.

There are several novelties of interest, however, being late developments in the structure of prominent cars, and features of a few cars which were not represented at any of the earlier shows. The motor cycle section is not large, due probably to the fact that motor bicycles have had really a larger show display this season than automobiles, being well represented at the Crystal palace automobile show and being the chief feature of both the Stanley and National bicycle and motor shows held earlier in the winter.

The show is well managed and in some respects is more popular with the general public than the Crystal Palace show, one reason being that it is held in a building more generally accessible. Probably, also, the nearness of spring and country motoring has created a buying spirit not prevalent at the time of the other great show.

To the casual observer the show appears to be a rearranged duplicate of the other exhibitions with some things missing and some things added. This is hardly just, for those novelties which are shown are worthy of close study, either on account of merit or degree of departure from the ordinary, and collectively form no mean exhibit of themselves. The show visitor who studied the cars at the previous show can still find much to warrant close attention in the 20 or 25 per cent of the displays which is comprised of new goods. In the way of special features is the exhibit of the Aero club and the display of makers of heavy trucks, which is probably somewhat larger and more representative of this branch of motor vehicle construction than was the corresponding display at the palace. On the whole it is an excellent show and its patronage seems to indicate that, necessary or unnecessary as a

factor of automobile trade in London, it makes itself useful. Seemingly shows may be held at most any season and yet interest the people.

One of the new cars never before shown is the Horbick, made in moderate and low power sizes. It is of tubular frame construction with a double cylinder vertical motor in the 10-horsepower size. The construction is typical with such features as mechanical inlet valves, three speed forward and reverse sliding gear transmission and propeller shaft drive and universal joints. The principal departure from ordinary practice in the transmission is the use of a spring drive connection between the clutch and the main shaft of the sliding gear set.

Especially interesting at the Tony Huber display is the four-cylinder vertical motor in 20 and 25-horsepower sizes. The cylinders are not only cast separately and bolted to the crank case, but each is really in four pieces. Bolted to the crank case is a double flanged cylinder or ring below the stroke of the piston. Upon this the cylinder proper is bolted, while the cylinder head and valve chamber casting is bolted on top the cylinder. The fourth piece is the corrugated copper water jacket. The valves are mechanically operated, and all are on the same side of the engine, being operated by the same cam shaft, which, as well as the cam shaft gears, is enclosed. On the opposite side from the cam shaft the crank case is provided with large inspection doors.

On the Spyker car is a novelty in the way of what is called a magnetic carburetor. Between the float chamber and the mixing chamber is a needle valve which is normally open. The valve seat is magnetically excited from the ignition current through an accessible switch on the steering wheel. When the switch is closed the seat becomes a magnet and draws the valve to it. When the switch is open the magnetic influence ceases and the valve is

returned to its normal open position by a spring. As no working part of the motor is disturbed, the valve may be conveniently brought into action to shut off the supply of fuel to the motor when the car is running down a hill, for when the bottom is reached it may be opened and the engine will at once begin to draw in a charge. No shock in restarting is caused because the motor is all the time running at its normal speed.

The low tension magnet to make and break system of ignition on the Martini car is at least simple. The rocking shafts, whereby the make and break is affected, are arranged vertically and by being raised or lowered the cars on them meet the cams earlier or later, causing the advance or retarding of the ignition. Across the tops of these rocking bars is a slidable lever with inclinations whereby the forward and backward movement of the lever determines the vertical position of the rocking bars and consequently the timing of the ignition.

In one of the new cars, the Richardson, there is an interesting system of governing the motor by the regulation of the intake valve lift. The inlet valves are mechanically operated, being on the same side and operated by the same cam shaft as the exhaust valves. The cam shaft is hollow and through it passes a shaft which determines the position of the graduated cams. The centrifugal governor acts upon this shaft and hence almost directly controls the position of the cams, the lift of the valves and the speed of the motor. The governor can be cut out by a pedal.

In the Craig Dorwald four-cylinder motor the crank shaft is not on the same vertical plane or center as the pistons and consequently the piston speeds differ on the upward and downward strokes. This setting of the crank shaft to one side allows the placing of an inspection door in the front end of the crank case. Another peculiarity in the construction of this motor is that the shaft is 1½ inches in diameter at the front end bearing and 2 inches at the rear bearing.

The clutch on the Mass car comprises four metal segments which are forced against the inner periphery of the fly-wheel by stout coil springs. The clutch is released by the



motor car

AGRICULTURAL HALL, LONDON



inward movement of the clutch ring, which presses studs against the lower ends of rocking levers or bell cranks, which, in turn, depresses the shouldered plungers that carry the springs. It is said that the clutch is quick and positive.

The De Cosmo motor is another in which the lift of the mechanically operated inlet valves is regulated to govern the speed of the motor. In the inlet valve chambers are braced adjustable wedges. Each wedge is provided with a circular shank in which is cut a small gear rack. The pistons that mesh with these wedge racks are all on the same shaft which is rotatable from the seat. Obviously the rotation of the gears draws the wedges backward and forward to determine the valve lift, the wedges being between the valve stems and their plungers.

In the Hotchkiss car one of the small novelties is the sector steering knuckle which replaces the usual steering head or spindle. The stub axle extends from a horizontal sector which moves between two parallel sectors. This construction is used to obviate twisting strains and transverse shocks.

Among the little cars the Bijou is at least a novelty if not a leader. It is driven by a 5-horsepower horizontal engine with steel cylinder and spun brass waterjacket. The initial drive is by chain to a counter shaft. Here there is a two-speed transmission gear consisting very simply of two sprockets either of which may be locked for driving by internal expanding clutches. Transmission is of course directly by chain to the rear axle, which is solid without a differential gear, free wheel clutches in each rear wheel being used instead. The thermo-siphon system of water circulation includes a tubular radiator placed above the motor, which is in front. The motor can be started from the seat by a strap arrangement.

A light, two passenger, 8-horsepower car, the miniature in construction system of touring cars and selling at \$175 or \$840, is shown by Brown Bros., and caused no little comment. The frame is of the slitch plate variety, and the three-speed and reverse gear box is carried on an angle steel under main frame, supported by the angle cross members which stiffen the frame. The honeycomb radiator fills in the forward part of the small motor basket, the water circulation being maintained by a geared pump driven from the engine shaft, the gear being encased. The engine is fitted with an automatic inlet valve, and a float-feed exhaust jacketed spray carburetor. The governor is carried on the cam shaft within the crank casing, and operates a rotary throttle valve set in the carburetor above the mixing chamber. This throttle valve is also controllable by the driver from the steering wheel post. The propeller shaft is fitted with universal telescopic joints. The spindle of the driving bevel gear is oiled from the dashboard by a drip feed lubricator. A form of double block grip brake, applied by pedal, is fitted to an extension of the main gear shaft at the rear of the gear box, while brakes of similar design operate upon brake drums forming part of the driving wheel hubs, and are applied by a side lever. The transmission gear is changed also by a side lever.

Another car with such elegances as a three-speed Panhard style of sliding gear transmission and the things which are supposed to go with it is the Star, two-cylinder car selling at the same prices as the Brown.

In body building there are many novelties



MR. AND MRS. WEDDEL IN THE ALPS

in all classes of cars, and it's particularly noticeable that comfort rather than racing appearance seems to have been generally sought. In this connection it is notable that the proportion of side entrance tonneaus is even greater than at the earlier shows.

#### NOVICES OFF BOULEVARDS

Cleveland, O., April 5—"Persons learning to operate automobiles and not expert in the management of them must not practice on Euclid avenue, Wilson avenue, or in fact, any other prominent streets."

This opinion was rendered yesterday by Acting Police Judge Selzer at the close of a hearing of an automobile case. Urban W. Gilbreath, of Mantua, O., was charged with careless driving of an automobile on Wilson avenue. He had come to Cleveland to buy an automobile. He bought one, but was so anxious to get out and practice that he neglected to take time to go to the city hall and procure a license tag. On Wilson avenue Gilbreath tried to steer and toot his horn at the same time, but the machine went wrong and knocked down a lady who was crossing. The court fined Gilbreath the costs.

#### LIGHT CARS FOR TOURING

The number of tourists who traveled in the Alpine regions last year with voiturettes and the lighter cars was remarkably larger than that using the heavy, high-powered automobiles. It is said this is due to the fact that the smaller motor cars have been so greatly improved that they give perfect satisfaction, even over the most difficult roads. Many owners of large touring cars are reported to have traveled in the Alps, the Pyrenees and the mountain regions of central Europe in light cars, while previously they traveled in large cars.

A French driver who travels a great deal through Europe recently said: "It is true I am using a 12-horsepower voiturette here this year and disposed of my 35-horsepower car. I did so because the lighter and less powerful machine is easier to handle, has given me perfect satisfaction, can be more easily repaired, and is more economical. The majority of motorists think that to make an extensive trip and especially one through the mountainous coun-

tries only big, heavy, high-powered cars will do. This impression was correct years ago, even up to within a year, but it is no more so. I could mention a half-dozen light cars and voiturettes which render better service than most of the large touring cars."

One of the most interesting tours made during last year was the one undertaken by Mr. and Mrs. Weddel, who traveled about 6,000 miles through the northern states of Africa, Italy, Switzerland and central Europe. They used a single-cylinder 10-horsepower Renault, and another similar machine was used by a party of friends who accompanied them during part of the tour.

#### DAKOTA HAS A CLUB

Grand Forks, N. D., April 2—"The first automobile club to be organized in this state is the Grand Forks Automobile Club. This club is now in existence 24 hours. W. L. Wilder was nominated president, P. S. Houghton secretary and A. Ekern treasurer. An executive committee of seven members was named to serve for 1 year and consists of the three officials named and H. N. Wells, W. R. Lasham, L. S. Stinson and James Lyons. There are eighteen owners of automobiles in town and six dealers who handle motor cars either exclusively or as a side line. It may be interesting to state that the cars of the eighteen motorists represent ten different makes—Leocomobile, Cadillac, Rambler, White, Searchmont, Olds, Crestmobile, Eldredge, Buffalo and Chicago Vehicle.

The club will affiliate with the A. M. L., as a clause in the constitution provides that all the members shall become members of the American Motor League. The Red river valley is flat, the soil of heavy clay and when dry, the roads are as hard as a pavement, though bad when wet and soft. By law in this state every section line is a public road, so that all roads here run either due north or south or east and west. It is no uncommon thing in the summer, when the roads are dry, to find a stretch of road 20 miles long, straight as a ruler, almost as level as a floor and hard as pavement.

#### SPEEDWAY PROJECTED

The chamber of commerce of Savannah, Ga., has appointed a committee of business men and public officers to see what they can do toward putting through a project to make a 6-mile straightaway automobile speedway, 70 feet wide and as level as it can be possibly made. The surface of the speedway will be slightly turtle back in shape and hardened with cement gravel on a rolled cork base. A loop of half a mile will be at one end of the course, thus permitting drivers to return over the same course and make a 12-mile run without turning the cars around.

There will be no crossings on the speedway and fast driving will be possible. The soil where the road will be laid is sandy and a few hours after a heavy rain, the ground is dry and dusty, but the cement gravel with which the course will be covered will shed water rapidly and the course will thus be in condition at all times for fast running. Later on the speedway will be extended another 5 miles, giving it a straightaway course of 11 miles.

The county convicts will be used for the work of grading and surfacing the road. Land owners along the road will give a right of way of 100 feet through their property and an available fund of \$75,000 is already in sight for the enterprise.



## ST. LOUIS TOUR PLANS

### Chicago Committee Makes Arrangements to Meet Eastern Crowd and Escort It Into Town

Augustus A. Post, chairman of the St. Louis tour committee of the American Automobile Association, has made announcement of the following amended itinerary and routes of the eastern divisions of the great run, which will end at the Louisiana purchase exposition grounds on August 4:

**New York Main Section**—Leave New York city Tuesday, July 26, with night stops at Kingston, 94 miles; Delhi, 71 miles; Binghamton, 79 miles; Bath, 104 miles; Buffalo, 120 miles, for rest on Sunday, July 31. Mileage, New York to Buffalo, 468.

**New England Section**—Leave Boston Monday, July 25, with night stops at Springfield, Mass., 107 miles; Albany, 92 miles; Utica, 100 miles; Syracuse, 50 miles; Rochester, 82 miles; Buffalo, 73 miles, for rest on Sunday, July 31. Mileage, Boston to Buffalo, 504.

**Combined New York and New England Sections**—Leave Buffalo August 1, with night stops at Erie, 94 miles; Cleveland, 110 miles; Toledo, 123 miles; Waterloo, 93 miles; South Bend, 76 miles; Chicago, 102 miles, where Sunday, August 7, will be spent. Total mileage, Buffalo to Chicago, 593.

**Combined North, Northwest, New York and New England Sections**—Leave Chicago, Monday, August 8, to Bloomington, 126 miles; Springfield, 60 miles; St. Louis, 102 miles, arriving there Wednesday night, August 10. Total mileage, Chicago to St. Louis, 288.

Total mileage for the tour from New York, 1,349. Average mileage per touring day, 96.

**New York Alternative Route No. 1**—Leave New York city Monday, July 25, with night stops at Poughkeepsie, 76 miles, and Albany, 74 miles, where the New England section will be joined.

**Southeastern Section**—Leave Washington, Baltimore or Philadelphia on July 27, with night stops at Gettysburg, 121 miles from Philadelphia; Bedford, 75 miles; Conneville, 70 miles; Pittsburg, 65 miles, for Sunday; Youngstown, 68 miles, and Cleveland, 68 miles, where the main body will be joined August 2.

**Central Section**, making a short link between Pittsburg and St. Louis—Leave Pittsburg August 1, with night stops at Wheeling, 60 miles; Zanesville, 70 miles; Columbus, 55 miles; Dayton, 70 miles; Cincinnati, 60 miles; Greensburg, 60 miles; Indianapolis, 50 miles, for Sunday; Terre Haute, 75 miles; Vandalia, 100 miles; St. Louis, 65 miles.

**New York alternative routes Nos. 2 and 3** will be via the southeastern and central sections respectively.

The central and southeastern routes are subject to slight change. Inspectors are to be sent over all the routes, and if it be found advisable to make detours because of better roads or better hotel accommodations, these changes will be made by the committee.

The western end of the run has already been planned. The runs and tour committee in Chicago—Frank N. Mudd, chairman; J. B. Burdette and Jerry Ellis—are having its hands full of details, working in harmony with Chairman Gillette of the national committee. The Chicago club will take control of the run only when it reaches South Bend, Ind. Chairman Mudd has made a num-

ber of appointments of the men who are to arrange the details at points around Chicago, although the list is not full even yet. The roll is at present as follows: South Bend, Dr. M. B. Pine; Milwaukee, Bacon, of the Allis-Chalmers Co.; Springfield, R. D. Loose; Rockford, A. W. Church.

George S. Waite, of Cleveland, has charge of the run between the Ohio city and South Bend. The envalade will reach Chicago Saturday evening, August 6, and will leave there for the exposition city the following Monday. The stops between Erie, Pa., and Chicago are as follows: Monday, August 1, Erie, Pa.; Tuesday, August 2, Cleveland; Wednesday, August 3, Toledo; Thursday, August 4, Waterloo; Friday, August 5, South Bend; Saturday, August 6, Chicago.

This route seems clear enough except as regards the first stop in Indiana at Waterloo. It takes a strong guess to discover Waterloo on the map and how the hordes of automobilists which are expected to take part in the run can be accommodated at that place is a mystery to some of the Chicago men.

The automobilists will be met at South Bend by the representatives of the Chicago club. Sunday will be spent in Chicago, probably quietly, and it is altogether unlikely that the 400 or 500 automobiles which are counted on will take part in any parade. They will have had enough to enjoy a rest on that day. In addition they will likely wish to look over their machines before starting again.

The Michigan delegation is organizing in good shape. L. W. Welch, of Grand Rapids, has been appointed chairman for his district and has selected as other members of his committee George W. Brown, of Holland, and Dr. Perry Shurtz, of Grand Rapids. There will be about thirty machines in the Michigan group, which will go from Grand Rapids to Holland Saturday and take the boat from Holland to Chicago, arriving in Chicago Sunday morning, August 7.

### RESTRICTIONS AT COLUMBUS

After having been buried for a long time, the automobile ordinance to regulate motoring in Columbus, O., was given two readings before the city's council on March 28, and then referred to the judiciary committee. According to the ordinance, vehicles propelled by a motor must pay a yearly fee of \$1 and be provided with an identification number furnished by the city auditor. Each car must be equipped with a lamp in front, which shall light a clear path, and another in the rear, so located that the number of the car may be easily read. All motor vehicles must be provided with either horns, whistles or gongs. Offenses against the ordinance are punishable with a fine of not less than \$5 and not more than \$100 for the first offense, and from \$25 to \$200 as fine and imprisonment of not less than 10 days and not over 30 days for subsequent offenses.

### UNIVERSITY AUTOMOBILISTS

The Columbian University Automobile Club at a recent meeting elected the following officers: President, William A. Tilt, 1903 college; vice president, William Pitt Striker Earle, 1904; secretary and treasurer, Roscoe Crosby Gaige, 1903; honorary vice president, George Mercer, Jr., 1904 law. Twelve cars are owned by students. A schedule of runs for May and June is being arranged.

## BOOST FOR GOOD ROADS

### Monograph on the Subject Issued By the Congressional Committee and Will Be Distributed

Washington, D. C., March 31.—One of the most important public documents that has been issued from the government printing office in some time, and one that is of particular interest to automobilists and other advocates of good roads, is the report of the hearing before the senate committee on agriculture on January 26 last of the Latimer and Brownlow bills making appropriations for the improvement of the public roads. Mr. Axt reported this hearing at some length. At the conclusion of the hearing permission was granted by the congressional committee to file additional briefs outlining more fully the views of the good roads advocates on this burning question. These briefs, together with the report of the hearing and a mass of interesting information bearing on the subject, have been incorporated in a monograph entitled "Roads and Road Building," which members of congress are sending broadcast over the country. A perusal of this monograph cannot fail to make the reader a convert to the good roads cause. The wide distribution of this highly interesting reading matter will give a tremendous boost to the pending legislation and will probably hasten its enactment.

It is truly stated in the briefs filed with the committee that "the good roads people do not come to congress with any captious demand, nor do they intend to suggest the existence of class distinction or invidious discriminations. They believe that the appropriation of congress of money to aid in highway improvement is authorized by the constitution, that money judiciously spent for this purpose will do much to elevate and enrich all classes, and that now is the time for action. They believe that the appeal for federal aid is founded on sound business principles and that all the facts warrant congressional favor. Here is an opportunity for the exercise of statesmanship of the highest order, and whoever, being in a position of power, shall lend his talents to the successful solution of this great question will endure himself to millions of the people and deserve for all time to be canonized." The gist of the various briefs is set forth in the following summary:

National aid to great undertakings has been given in the past. Congress has repeatedly exercised the constitutional right to aid internal improvements by appropriations for rivers, harbors, railroads, canals and highways.

The improvement of the country roads is of vast importance from both a commercial and sociological standpoint.

National aid to the states would incite to state organization and the adoption within the states of scientific and systematic road construction, which result would reach far beyond the immediate neighborhood where actual construction is done.

No civilized country in the world that has good roads has accomplished this result without national aid and direction—according to consular reports of the state department for 1891.

It is believed that one of the best results from national aid to road construction would result from the establishment of a road bureau

in the department of agriculture, and a sufficient appropriation so that it would be possible to start scientific road construction in or near every community in the country.

We ask that national aid be extended for only a portion of the cost, as provided in measures now pending in congress.

The national bureau of roads, when established, should encourage the organization of state highway commissions in those states where they do not now exist.

An appropriation, to be expended under proper legislative restriction by the secretary of agriculture in the operations of a bureau of road department in co-operation with states and localities, would quickly result in the organization and equipment of proper offices and expert forces and state legislation for that purpose in the various states.

### COAST A BIG FIELD

San Francisco, Cal., March 30—R. E. Olds, of the Olds Motor Works, of Detroit, was in town and made some interesting remarks concerning this state: "I am very much pleased with the automobile prospects on the coast and think that in time California will become one of the principal automobile centers. I think the day will come when motor cars will be used in place of stages and trams in this state. I have too much feeling for horses to see them pushed the way they do out here on the mountain roads. From what I have seen there are a great many roads on the coast where they drive horses until they are almost ready to drop in order to make the distances.

"I find the Pacific coast roads well adapted for motoring and the interest in automobile matters has greatly increased since I was here 2 years ago. Future growth will depend largely in getting machines fast enough, because the buyers are many and the people have already reached the point where they see the great advantage of the automobile."

Mr. and Mrs. I. L. Park, of White Plains, N. Y., made a remarkable run last week in their White touring car from Monterey to San Francisco. This is no easy trip when the roads are good, but at this time of the year it is a very difficult undertaking, as the highways are in bad condition. It poured during most of the journey and the San Juan grade was impassable, the road having been plowed, so that the party had to go around the Cannis canon. The start was made at 8 o'clock in the morning. San Jose being reached at noon, notwithstanding a stop at San Juan. The trip to Milbrae was made the same afternoon and the night was spent there. The run to Frisco was made the next morning over the Bay road. It has probably been several weeks since an automobile has made the Bay road trip and it will probably be some time before another one attempts it, on account of the difficult nature of the road. The rear wheels of the cars were often hub deep in the mud and the going was the worst possible.

The automobile buses of the St. Francis hotel are now in operation. It is claimed this is the only hotel in the United States using automobile buses exclusively for its transportation service. An indication of the popularity of the automobile in this city may be gathered from the fact that an average of 250 automobiles can be seen daily on the principal approaches to Golden Gate park when the weather is somewhere near good.

## PLAN MOTOR-CYCLE CLUB

### Two-Wheeled Enthusiasts of Buffalo Perfect Organization—Pierce Company To Build Garage

Buffalo, N. Y., April 4—Believing that the rapidly increasing interest in motor cycling had reached a point where such a movement would be of advantage, a large delegation of the riders of motor bicycles met Saturday evening and took measures toward effecting an organization. Clarence Becker presided, and committees were appointed to arrange by-laws and constitution. An effort will be made to interest the riders of Buffalo in this movement, as it seems necessary that some measures be taken to check as far as possible the constantly increasing sentiment against these machines. A committee will communicate with the police department and endeavor to make some arrangement with which offenders will be suitably punished and still have it possible for the motorist to ride in the streets without having to be constantly on the watch for the police, which now seems to be the rule. That the movement will succeed is earnestly hoped, and the prospects for a large and prosperous club are, judging from Saturday night's attendance and the enthusiasm shown, exceedingly good.

Charles Clifton, of the George N. Pierce Co., says his company believes in expansion and for that reason and others it is to have a handsome and spacious garage in Buffalo. The Holland Purchase Realty Co., which bought the old Wright house and grounds next door to the Teck theater building several months ago, will put up a magnificent three-story structure which will be occupied by the Pierce company as a salesroom, warehouse and garage. The company has signed a lease for 10 years. Ground will be broken for the structure as soon as the present building can be torn down. The new garage will have a frontage on Main street of 80 feet and a depth of 100 feet, with entrances from Franklin street in the rear and Edward street on the side. It will be of slow-burning construction, equipped with all modern conveniences and will be especially adapted to the concern's growing business. The Pierce people will continue to manufacture automobiles at their present factory on Hanover street, and will have in the new building one of the finest display rooms of any automobile concern in the country. The garage will be up to date and of large size with all facilities for the charging, repairing and storing of cars. The present branch store on Main street is entirely inadequate and Mr. Clifton has rented a part of the Roe Automobile Co.'s garage so as to take care of the Pierce company's storage business in the meantime.

The Alex Weller Co., one of Buffalo's old carriage houses, which handles the Stevens-Duryen, has made a change. Since the death of Alex Weller, the business has been run by W. W. Weller and E. E. Dennison. The latter has now bought the business and has secured Nelson Baker to handle the automobile end.

### BIG BOOM IN RHODE ISLAND

Providence, R. I., April 2—That this season will be the greatest from the automobile standpoint in the history of the trade in Rhode Island was conceded by many who had their

cars to the ground in the middle of the winter, and now that the agents have begun to show activity among the people who are likely to buy machines their first conjectures are more than confirmed. Besides the agencies that have been opened for the Franklin and Northern cars, the Ford has made its appearance within the last few days. J. Keefe & Co., taking the local field. Demonstration cars are flying about town all day long and orders are being booked.

The Pope Manufacturing Co. is having two new garages built in this state, one in Newport and one in Pawtucket. The Newport building, to be devoted to storage and repair stations, is located just south of the new Andrain block, next to the Casino. It will have a capacity of 100 cars, being 60 by 110 feet. It will be partly a two story building. The Pawtucket garage will be at 8 Pleasant street, not far from the store, and will be able to hold thirty carriages.

During the past week the news has leaked out that the Central Automobile Exchange of this city has placed an order with the Stanley Motor Carriage Co., of Newton, Mass., for 500 of its machines of the 1904 model, and this company is going to make only 1,000 cars this year. Last year in this part of the country Stanleys were selling at a premium and the people who have put in this large order have done so with the expectation that the price will go up before the season is over. The Stanley company is turning over to the Central Automobile Exchange many of the orders it is receiving from those who would like to establish an agency, but it is filling retail orders at the factory.

H. H. Rice recently returned from a trip through the west and gave a very optimistic account of the prospects of the trade there. One of the unusual scenes that he witnessed was over 1,000 engines stacked in the store room of the Cadillac factory.

The Rhode Island Automobile Club will hold a smoker in the course of the next few weeks, and the speaker will be C. H. Gillette, secretary of the American Automobile Association, who will explain the plans that have been made for the tour to the world's fair at St. Louis.

### CLUB RUN AT CHICAGO

The first club run of the season for the Chicago organization is planned for next Saturday. The event will be a "directors' run," President Farson, Director Donald, Chairman Mudd, Dr. Greene and others of the older members being expected to take part. A feature of the event will be the turn-out of the newer element. It will be the first chamois of a great many automobilists to take part in one of the Chicago Automobile Club events and it is expected that some thirty cars will participate. Dinner will be served at the South Bay hotel, Indiana Harbor, Ind., and the return will be made that evening. The route probably will not be "as the crow flies," but a little to the "s-u-t-h-a-r-d." Chairman Mudd, of the runs and tours committee, said yesterday that the trip will be made through Hammond and East Chicago, which is a bit longer, but which assures good roads. The road between South Chicago and the new steel towns is a questionable quantity at any time. The run will start from the club house in Michigan avenue at 2 o'clock in the afternoon and the return trip will be made in the evening.

## HEAVY TRUCKS IN FAVOR

### One Chicago Concern Finds the Electric Vehicle Profitable—Local Trade Association Formed

Chicago, April 6.—Several more big automobile trucks are to do the heavy work for Montgomery Ward & Co. The big Michigan avenue concern probably does as much heavy teaming around town as any in the west, and it is pretty well convinced that the automobile truck is what it wants. The company already has four of the machines in use and has just ordered three more. The four machines which have demonstrated their effectiveness to the satisfaction of the company were built by the Vehicle Equipment Co., of Brooklyn. Of the two new cars ordered one was from the Electric Vehicle Co., of Hartford, and the other from the Gibbs Mfg. Co., of Glendale, Long Island. The name of the third machine ordered was not mentioned. The Montgomery Ward trucks carry from 5 to 7 tons. The company using them estimates their effectiveness as compared with that of two horse teams, considering time and amount carried, at 190 per cent.

The Chicago Automobile Trade Association was definitely organized at a meeting in the Chicago Automobile Club Monday evening. The formation of such a body has been hanging fire for a year, attempts to put it through having failed. According to the constitution the object of the association is "to afford mutual protection to its members and the public and to develop, so far as may be, the automobile business on right and proper lines." Fifteen concerns were represented at the meeting. Charles H. Tucker acted as chairman. The election of officers and the bringing up of the details as to by-laws and the like is set for the meeting next Monday night at the same place.

Dunbar & Co., 10 North Desplaines street, well known makers of horse and man-drawn peanut and popcorn roasters, and especially practical machinists, have entered the automobile game, giving their time at present to rebuilding cars. They have, too, erected a number of excellent machines.

Accidents are likely to be more common during the coming season than during any of those that have gone before, according to one of the Michigan avenue dealers. As everybody seems to be evincing a decided preference for the high power touring cars and as many of this number know but little about controlling the big cars, the result according to the Michigan avenue man, are likely to be disastrous in some cases.

Parlee & Co. sent one of their four-cylinder cars over the route to Elgin and back last week. Darwin McIlraith and Dr. Johnson were in the car and made the trip without a delay, despite the rain and bad road.

F. B. Redington & Co., machinists, have established a new four-story shop at 107 South Sangamon street, on the west side, and have equipped it especially for difficult automobile repairing and remodeling. One entire floor free from machinery is devoted to automobile work and this of course is supplemented with the machine shop facilities of the whole establishment.

Dan H. Southard, western manager for the Gas Engine & Power Co. and Charles L. Seabury & Co., was operated on for appendicitis

at the Wesley hospital on Saturday. The operation is said to have been successful and the patient is progressing nicely towards recovery.

A garage which will be known as the Automobile Palace has been established on Canal street just south of Adams street and close to Jackson street bridge. It is under the management of Judge Bryan, with A. M. Thayer, until recently of Los Angeles, Cal., as superintendent. A larger repair shop equipment will be installed.

### ASPHALT MAY BE HURT

Washington, D. C., March 31.—The application of the Auto Transit Co. for a license to operate a line of electric automobiles for sight-seeing purposes, which was viewed with favor by Commissioners McFarland and West, but which was held up by Commissioner Biddle, has been granted conditionally. After a thorough consideration of the matter, Commissioner Biddle joined with his colleagues in making a favorable recommendation that the license be issued, but stipulates that the district commissioners shall reserve the right to recall the license in case the vehicles should cause damage to the asphalt pavements during the hot weather.

In his report Commissioner Biddle, who is an army engineer designated by President Roosevelt to act as engineer commissioner of the District of Columbia, states that for a year past he has been observing the effect of automobiles upon the asphalt pavements of the city to determine whether or not the pavements are damaged by motor vehicles. The ordinary cars, he says, thus far have not damaged the pavements, but in the warm weather, when the asphalt becomes soft, he is apprehensive lest the large cars might tear up the sheet asphalt. The proviso noted with reference to the license for the Auto Transit Co., he states, will apply to all large automobiles. There are several big electric vehicles in the city, some of which are used for draying purposes, and in the event damage to the pavements results from the operation of these cars it is said that their licenses will be revoked.

"It is not the weight of the automobiles that might cause the damage," said Commissioner Biddle to the Motor Age representative, "but it is the tremendous pulling of the wheels upon the asphalt caused by the manner of locomotion. In warm weather it is possible that the action of the wheels upon the pavement might tear up the sheet asphalt and cause considerable damage."

### RECENT INCORPORATIONS

Buffalo, N. Y.—Bison Motor Co., capital stock \$25,000. Directors, Frederick Wendt and W. A. Letz, of Buffalo, and F. I. Alliger, of Tonawanda.

Camden, N. J.—Camden Motor Co., capital stock \$2,000. To manufacture automobiles. Directors, Josiah G. Reeves, John T. Bottomley, C. M. Reeves, E. G. Reeves.

Chester, Pa.—Pennu Automobile Co., capital stock \$5,000.

Chicago—Park Auto Co., capital \$2,500. To manufacture automobile supplies. Directors, Frank H. T. Potter, M. J. Merki and O. T. Cody.

Detroit, Mich.—Little Four Automobile Mfg. Co., capital stock \$25,000. Stockholders, Wyatt L. Brown, John D. MacLachlan and Fred L. Brown.

## ALTER HILL-CLIMB RULE

### Power As Well As Weight To Be Considered at Boston, Making Fifteen Classes—Trade Notes

Boston, April 2.—It has been determined that the machines competing in the hill-climbing contest of the Massachusetts Automobile Club, April 19, shall be divided into classes according to their power, as well as weight. This means that there will be fifteen classes instead of five, as originally intended, as the five classes decided upon for weight shall also apply to gasoline, steam and electric vehicles. This much was determined by Chairman William Wallace of the race committee after consultation with many of the owners and dealers in automobiles in this city. The start will be a rolling one, and in order that all machines shall be on an equality in that respect each car will be started from a line 50 feet from the timing point, and in that short distance it will be permitted to gain as much speed and headway as possible. There will be no restrictions on machines except that they shall conform in all respects as to the weight of the class for which they may be entered. So far as passengers are concerned that is left optional with the entrant. He can carry as few or as many as he desires. The record for the climb for cars weighing under 2,000 pounds is held by P. E. Randall at 43½ seconds, and this is sure to go by the board, as is also that for cars weighing over 2,000 pounds, held by J. L. Snow at 43½ seconds. These are the records for rolling start and there is no question that they will be reduced this season, while some of the marks established in private trials are also in danger of being surpassed.

The recent fine weather in this section has caused a thorough opening of business. The past week saw more real business transacted than during any one week of the previous year. The police likewise have been busy, seemingly endeavoring to keep up with the increased trade, and during the week made arrests by the wholesale. The police here have a habit of appearing in civilians' address and hiding behind posts and fences while they hold a stop watch on the unsuspecting operators.

The number of high grade foreign machines owned by the automobilists of this section was materially increased during the past week, when several were delivered to their new owners.

The Dumont is the latest car to establish its headquarters in Boston. It is located on Ferdinand street and is to be handled by W. E. Furniss of Cambridge. Mr. Furniss has also purchased the Cannon steam racer, which he has remodeled as a team touring car capable of seating six persons in the tonneau and two in front with the operator.

A. E. Morrison, of the Peerless company, has done an immense business since the close of the show and is looking to a continuance of his success. He is, however, somewhat handicapped by his limited accommodations, and is patiently awaiting the completion of his new garage.

### WASHINGTON BUSINESS BOOMS

Washington, D. C., April 2.—Spring trade has really opened with a flourish, judging from the reports made by the automobile dealers this week. The weather was favorable, more people were out, and prospective purchasers

were more in evidence. The changed conditions are encouraging, and on every side the belief is expressed that from now on there will be no more talk of dull times. There is now little doubt that most prospective purchasers were waiting until the show, and now that it is over many of them are turning in their orders to dealers.

S. S. Olds, Jr., of the Olds Motor Works, is in town for a few days, making his headquarters with the National Capital Automobile Co., of which concern he was formerly manager. Mr. Olds has been on an extensive tour of the southern states and Mexico. To a *Motors Age* man Mr. Olds stated that throughout the south the greatest enthusiasm was being manifested in automobiles and the outlook for business was very flattering. In the City of Mexico the use of automobiles is increasing at a great rate. As showing what a fertile field the Mexican capital is Mr. Olds mentioned that one man there, a wealthy mine operator, had no fewer than sixteen automobiles in his private garage, and he has just placed an order for an Oldsmobile.

A. L. Kull & Co., whose garage is located on Thirteenth street, are having good success with the Ford car, several sales being made this week. This firm will also add the St. Louis and Royal Tourist cars shortly.

W. H. Kirkpatrick, sales manager of the Peerless Motor Car Co., and E. B. Cummer, traveling representative of the same company, were in Washington this week.

## OPENING TOLEDO TRADE

### Ohio City's Largest Motor Store Inaugurates Season With Two-Day Show in Its Big Salesroom

Toledo, O., April 4.—The first automobile show ever held in Toledo was given April 1 and 2 by the Toledo Motor Car Co. at its new store at 1012 Madison avenue. The company handles a varied line of some of the best known cars and its garage is one of the largest in the country. The building is 50 by 100 feet with three stories and basement, all of which is occupied by the company's business. It is unusually well arranged and the equipment is complete, including a machine shop supplied with an elaborate outfit of machine tools, a storage battery room supplied with facilities for repairing, testing and charging batteries and electrical parts, a wash room with ample facilities; two large store rooms, and a fine salesroom with display windows.

The company was formed this year with J. N. Hick, president; Harry King, vice-president; E. H. Close, secretary-treasurer, and B. O. Gamble, manager. It handles the Pope-Toledo, Winton, Columbia, Pope-Tribune, Haynes-Apperson and Elmore gasoline cars and the Columbia, Studebaker and Baker electrics. Samples of all the various 1904 models of these cars were displayed in the large salesrooms on the first and second floors. The

building was profusely decorated with cut flowers, potted plants and palms. Each afternoon and evening a full orchestra was in attendance.

The company sent out neat invitations to automobilists all over Toledo and the surrounding towns and the attendance was a decided surprise, as the establishment was crowded both evenings. Among the factory representatives on hand were the following: Charles B. Shanks, Winton Motor Carriage Co.; M. L. Goss, Baker Motor Vehicle Co.; A. M. Welch, Studebaker Bros. Mfg. Co.; W. W. Burk, Electric Vehicle Co.; James Becker, Elmore Mfg. Co.; Frank Nutt, Haynes-Apperson Co.; Court Brown, Pope Motor Car Co., and C. M. Hall, Badger Brass Mfg. Co.

The Ford Automobile Co., of which W. G. Alexander is manager, has a garage at 901-903 Jefferson street. Mr. Alexander has the Ford line in twelve counties in northern Ohio and he has placed several good sub-agencies during the past few weeks. He expects to sell at least 100 Ford cars in this territory and he has made an excellent start in Toledo.

The Toledo Storage Battery & Electric Co. has a battery charging and repair station in connection with Mr. Alexander's establishment. The company is now marketing the Miller storage battery, for which a number of strong claims are being made, among them that it occupies 25 per cent less space for a given output and gives 25 per cent greater output per pound, than other storage batteries.

## METROPOLITAN GARAGE GOSSIP

Percy Owen shipped a Winton to a physician in Geneva, Switzerland, this week.

The Cadillac Co., of New York, has orders for its entire allotment of model B cars up to June 1.

George B. Adams, local agent for the Apperson cars, will move his headquarters to 301 West Sixtieth street on April 10.

Work on the big Worthington garage has begun and will be completed by September 1. The European, Bolee and the American Berc cars will be sold.

"Judging from the present demand," says Mr. Herman, of Herman & Schultz, "I will easily dispose of my entire allotment of Bantlers. My only complaint is that the allotment is not large enough."

The Central Automobile Co. has received the Pullman Napier, the 15-horsepower car with Cape Cart top, and the V. & D., which were exhibited at the Boston show. The company is American sales agent for these makes.

E. S. Partridge, of the Standard Automobile Co., has been to Chicago to establish a Decaturville agency. W. K. Vanderbilt, Jr., by the way, has just given the company an order to install the 60-horsepower engine from his former world's record holding Mors in the 35-foot boat Bob Jacob, of City Island, is building for him.

The F. A. La Roche Co., which controls the American Darracq Automobile Co., shows correspondence with A. Darracq & Co. in proof of its holding the exclusive American rights for the Darracq in opposition to the claim of the German & French Automobile Industry, of Philadelphia, that it imports and sells them. Mr. La Roche, by the way, will shortly open a Philadelphia branch. He has leased a four-story building at 319-321 North Broad street,

where he will establish a garage for the exclusive storage of European automobiles.

Richard Croker, the former Tammany boss, has ordered a White touring car shipped to his place at Wantage, England.

Peter Fogarty was able to open his new garage on Thirty-eighth street last week on the day announced with a display of six Northern cars ready for customers to take out.

Manager Hopkins, of the Brooklyn Automobile Co., which has garages in Brooklyn and New York for the sale of the Haynes cars, paid a visit to the Kokomo factory last week.

Andrew Carnegie has given the New York branch of the Electric Vehicle Co., the largest all around automobile order yet placed at one time by an individual for private use. It calls for a complete equipment of cars for the new garage the philanthropist is building on East Ninetieth street. The cars embraced in the order, whose total is \$20,000, are all electrics for his family's city use and consists of an opera bus, a brougham, a victoria and a landau. Delivery of them is to be made September 1.

The Pope Manufacturing Co. has established a garage for the exclusive sale of Waverly electrics at 941 Eighth avenue, adjoining the Woods Motor Vehicle Co.'s headquarters. The success that has followed Colonel Pope's administration in all four lines of automobile production is particularly manifest in this city, where the clean out of cars has been so complete, especially of the Pope-Toledo, that Eliot Mason, the local general sales manager, has had to take a trip to the factories to look after an increased allotment of cars for New York. As a result of all this Colonel Pope has leased a plot of ground at Fifty-fifth street and Broadway and will at once begin the erec-

tion of a great garage, which will serve as the company's general sales headquarters in the city.

Hollander & Tangeman received by the Princess Irene a 24-30 horsepower and four 16-20 horsepower Napier cars.

Newberry & Dunham, who have taken the Fredonia agency, are well pleased with the progress these cars are making in local popularity, having taken twelve orders for them since the show.

S. D. Stevens, who won racing fame at Ormond last January with his 60-horsepower Mercedes, has bought a 35-horsepower Darracq landaulette and also a 15-20-horsepower chassis. The latter will be fitted with a racing body.

The first floor of the six-story building of the Locomobile Co. of America, has been remodeled, giving the entire space, 75 by 80 feet, over to the storage of cars. About 130 machines are being taken care of in the building at present. One of the features of the management is the daily in-and-out record, which accounts for every car as it enters or leaves the building. This assures storage customers that their cars are not being operated without their consent. The garage is kept open at all times.

I. L. Atwood and Frank Bowen have withdrawn from the firm of Babcock, Atwood & Bowen. Mr. Babcock will conduct the Buffalo Electric Vehicle Co.'s local business at the old stand on Eighth avenue. Mr. Atwood has joined forces with G. L. Hurry and bought the Pioneer Automobile Co. at 54-56 West Forty-third street. Mr. Atwood takes the Yale agency with him and has also secured for his company the selling of Courier cars. A general storage and repair business will also be conducted with ample facilities for both.

# MOTOR BOATING

## FREE WHARFAGE AT ST. LOUIS

St. Louis, Mo., April 2—Yachts, launches and houseboats have been granted free wharfage space along the river front during the world's fair by Joseph P. Whyte, harbor and wharf commissioner, acting for the city of St. Louis. The concession lasts during the 7 months of the exposition. The circular reads, in part, as follows:

"Yachts and steam launches—Yachts, steam launches and all boats propelled by their own power will be assigned wharf space between Chouteau avenue on the south and Biddle street on the north. No charge will be made for wharfage.

"Houseboats—Houseboats will be assigned wharf space north of Biddle street and also south of Chouteau avenue. No charge will be made for wharfage.

"Application for wharf space—Application for wharf space should be made to Joseph P. Whyte, harbor and wharf commissioner, city hall, St. Louis.

"Telephone service—Free telephone service will be furnished to visitors at the harbor office, foot of Market street."

Boat clubs of St. Paul, Minneapolis, Wisconsin and other up-river cities have projected trips to St. Louis by water. A number expect to use their vessels as hotels during their stay.

## LONG RACE OFF HARTFORD

Hartford, Conn., April 2—Realizing that the Connecticut river, with its 60 miles of deep still water makes an ideal location for a long distance test of high-speed motor launches the special committee of the Hartford yacht club, of which F. A. Law is chairman, is now at work preparing a program for a special race meet which will bring boats from all over the east. It is the plan to hold the race on July 3, so as not to interfere with the regular Independence day regatta of the Hartford yacht club held off Fenwick. It is the present plan to run a race of 50 miles.

The crafts will start from Hartford and will finish at the mouth of the river, Fenwick, where the Hartford Yacht Club has a \$20,000 club house station. A special train will be chartered by members of the club to accompany the boats on the Valley branch, which runs on the high bank almost continually in the sight of the racers the entire distance. It is expected that the run will be done in three and a half to four hours. The channel of the river will be well buoyed out, with frequent special stakes to mark the obstructions, but as the river is well known to most eastern yachtsmen it is not thought that any difficulty will be met. Pilots, however, will be supplied contestants who do not wish to undertake the trip without previous experience in the river.

There are in Hartford a number of smart boats, and the builders along the river and in western sound waters are putting up some flyers to be owned locally. It is thought that forty launches will compete in the several classes in the 50-mile run, from Hartford. The day following will be given up to short

dash races in the morning off Fenwick in open waters, so that weatherly qualities of launches can be tested out. Mr. Law has had a number of favorable answers to early announcements and plans for this long race are in progress.

## NEW LOZIER SPEED BOAT

New York, April 2—A new Lozier speed boat is soon to take to the water, being constructed at West Chester. It is of new design, by Henry Gielow. The boat is 26 feet 3 inches over all, 25 feet 3 inches on the water line, 4 feet 4 inches beam, and her extreme draft is 24 inches. The engine will be an automobile motor, weighing 540 pounds and capable of developing 30 horsepower at 1,000 revolutions. There are two cockpits, the forward one containing the engine and a seat for the wheelman, who also has control of the motor, and the after one being designed for guests. The planking will be double, the inside of elm and the outside of mahogany. At the forward cockpit the hull is a cylinder, with the sider flattened forward until they meet in the sharp vertical line at the stem. Following back the round section merges into an elliptical midship section, widening and flattening until the stern is reached, the hull and deck, as usually understood, forming one continuous whole.

## NOVEL NAVAL SCHOOL

Three specially-constructed motor boats are to play an important part in the summer campaign of the Northwestern Military Academy of Highland Park, Ill. Major Davidson, of military motoring fame in this country, has ordered from the Truscott Boat Mfg. Co., three 30-foot motor cutters, and those are to be especially fitted for a cruise down the Illinois

and Michigan canal and the Illinois river to St. Louis. Each boat will be manned with one officer and a crew of eight students. At the fair the crews will give exhibitions of maneuvers in the electric launches used in the lagoons. When this part of the program has been completed the motor boats will head up the Mississippi to the Wisconsin river, to Portage, thence through the canal to Lake Winnebago, through to Green Bay, into Lake Michigan and up the west shore to Chicago. Stops will be made at all important places and exhibitions made.

## MOTOR BOAT NOTES

The officers of the American Power Boat Association desire to announce and impress upon the minds of everybody that individual members will never be permitted in the organization.

Every boat shop and yard about Chicago is rushed with work, either in the line of new craft or in fitting motors in old ones. Ask any builder thereabouts the cause of the activity and the invariable answer is: "Going to St. Louis."

Jacob Brown, of East Syracuse, N. Y., has had a handsome gasoline launch, 66 feet long and 13 feet beam, constructed during the past winter at Phoenix, N. Y. It is built for pleasure and comfort and is fitted with all the latest improvements. Mr. Brown is making arrangements to take a trip to St. Louis in the boat this summer.

The Monaco motor boat exhibition was inaugurated April 2, according to cable advice, and is the most extensive of its kind ever held. More than fifty boats of all kinds, dimensions, power and weight are shown, among which figure almost all the first racing craft built during the past two seasons. There are also three American boats on exhibition, the *Usosna*, the *New York* and the *Newport*.

One of the Fiat speed boats which are being introduced by Hollender & Tangeman, of New York, is shown in the accompanying illustration going at a speed said to be 20 miles an hour. The Fiat boats are assembled in this country from American-made hulls and Italian-made Fiat automobile motors. They are made in models ranging from 16 to 200 horsepower. One of them is scheduled to race Smith & Mabley's *Vingt-et-Un* early this summer.



MOTOR AGE

AMERICAN FIAT SPEED BOAT

# Motor Car Family Trees

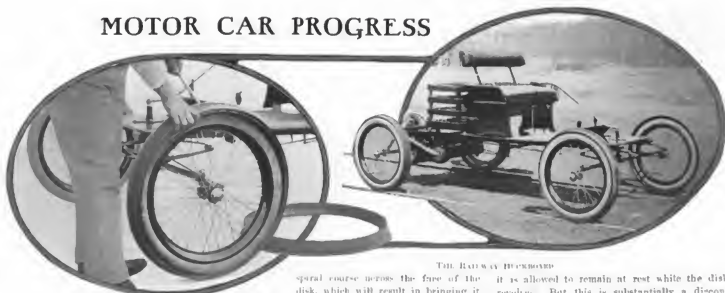
No. 3 The Peerless

1904 Pullman Model  
1904 Canopy Top Touring Car  
1902 Tonneau Car

1901 DeDion Style Motorette  
1904 Metropolitan Cab  
1903 Duchess  
1903 Touring Car



# MOTOR CAR PROGRESS



## PECULIAR FRICTION DRIVE

Edward P. Cowles, of Warren, O., is the inventor of the friction transmission shown in the accompanying illustrations and which is proposed by him as a system of transmission which allows starting, stopping and change of speed without disconnecting the roller from the driving disk or sliding it across the face of the disk. Hence he further proposes it as a system of transmission to be used to obviate the Selden patent, which protects the use of a disconnecting clutch between the motor and road wheels of a vehicle.

The gear consists mainly of the usual friction disk and roller, the former being preferably the fly wheel of the motor. This is preferably locked by two edge rollers which sustain the pressure between the disk and driven roller. The roller is slidably mounted on the usual cross shaft, which may be prolonged into a propeller shaft for driving the vehicle, provided the motor is set with its crank shaft across the vehicle, so that the roller shaft will be longitudinal.

That the roller may slide easily upon its shaft and yet not rotate upon it, the usual groove and feather engagement is replaced by a ball bearing roller engagement with four longitudinal grooves in the roller shaft. The shaft rotates in bearings in the ends of a bail which is hung from a rock shaft so that the rotation of the rock shaft tends to raise and lower the roller shaft relative to the axial line of the driving disk. It is upon this movement that the action of the drive depends.

If the roller is raised or lowered from the axial line of the disk it will naturally take a

spiral course across the face of the disk, which will result in bringing it toward or rolling it away from the center of the driving disk and consequently changing its speed of rotation. The roller shaft also has bearing at both ends in vertical guide arms, so that the tilting movement of the rock shaft parts will not affect the vertical plane of the roller axis, the bail being adapted to accommodate itself to this movement.

It is obvious that in the spiral action of the roller on the face of the disk it may be brought substantially to a fixed position relative to its distance from the center of the disk by moving the rock shaft so as to bring the roller to its normal level on the axis of the disk. Hence it may be set for any speed and on either side of the disk to furnish either forward or backward drive. That this automatic lock may be made mechanically positive the inner edge of the rock shaft is furnished with a gear rack whose teeth are adapted to engage corresponding teeth on rigid brackets when the roller shaft coincides with the disk axis.

The stopping of rotation of the roller and its dependent elements of transmission is effected by bringing the roller to the center of the disk, where the rotative tendencies in either direction would counter-balance each other. Here the gear has little, if any, advantage over the ordinary friction system, in which the roller is adapted to slide over the face of the disk; for it is not practical to bring the roller to a dead center on the disk without releasing the pressure, which would be a disconnection, the result which the inventor seeks to avoid.

Hence Mr. Cowles provides the center of the disk with a small roller plate, level with the face of the disk and mounted in it on small ball bearings. By running the roller onto this

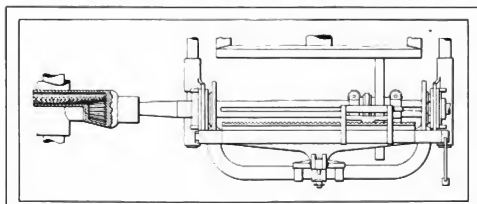
it is allowed to remain at rest while the disk revolves. But this is substantially a disconnection, as the roller plate in the center of the disk is no part of it and when the roller is on it is just as much out of connection with the disk as though swung away from it or run off the edge. Thus, while the gear system provides a somewhat novel—and complicated—method of changing speed and reversing the direction of the drive, it hardly accomplishes the result of providing a stopping and starting medium which is not a disconnection, and would not, probably, be judged as not infringing the Selden patent.

## REVERSIBLE MAGNETO PULLEY

The Dayton Electrical Mfg. Co., of Dayton, O., has recently introduced what is termed a universal or reversible pulley for driving ignition dynamos or magnetos. This is intended especially for use with internal combustion engines which are reversible, such as the two-cycle motors used on some launches. It is being almost essential that the rotation of an electric generator be constant, the utility of the device is obvious. It is driven by either of two belts, one of which is crossed, so that no matter in which way the motor fly wheel rotates the direction of rotation of the pulley and consequently of the magneto or dynamo driven by it is constant. It is claimed that when this device is used with a dynamo or magneto there is sufficient rotative energy to maintain the current supplied during the moment of change of direction of the motor rotation, so that there is no appreciable hesitation in the action of the ignition before the engine begins to act in the opposite direction.

## A RAILROAD BUCKBOARD

The Orient buckboard, made by the Waltham Mfg. Co., of Waltham, Mass., has been adapted to a new purpose that seemingly is of common utility. Upon the order of an Alabama railroad president one of the buckboards was made into a convertible road and railroad car and the means of doing this is so simple that it is probable the car thus equipped will be generally introduced for railroad inspection and similar work. The car is the regular buckboard, but is fitted with the regular pneumatic tires, in addition to which is a set of supplementary steel rims which, on the outer periphery are flanged in the style of an ordinary railroad wheel and whose inner periphery is curved to fit the tread of the pneumatic tire. This supplementary steel rim is slipped on over the pneumatic tire when the latter is de-



PLAN VIEW OF COWLES' FRICTION DRIVE

MOTOR AGE

lated and is secured by the inflation of the tire. The maker states that when the pneumatic tire is inflated the steel tire is held with absolute safety against side strains, it being further claimed that in tests strains of 600 to 700 pounds would not avail to loosen the steel tire. As the steel tire can be easily removed by deflating the pneumatic, a light crate is attached to the truckboard back of the seat, so that a person using the car interchangeably on roads and railroads may carry the steel tires conveniently along. It is said that the car gives an increase of about 25 per cent in speed on the railroad over its regular rate of high-way travel. The company hints that in addition to railway work the car would be useful in military operations, inasmuch as troops could travel on them by railroad to as far as possible to the desired objective point and then proceed by road.

### INTERESTING CATALOGUES

Niles-Beniet-Pond Co., 130 Liberty street, New York—720-page book illustrating the machine tool products of the company's five factories. It is one of the most complete books ever published on machine tools and is an excellent example of the modern method of catalogue making in which straightforward description and high grade illustration of the goods listed replaces that variety of catalogue material known in the vernacular as "hot-air."

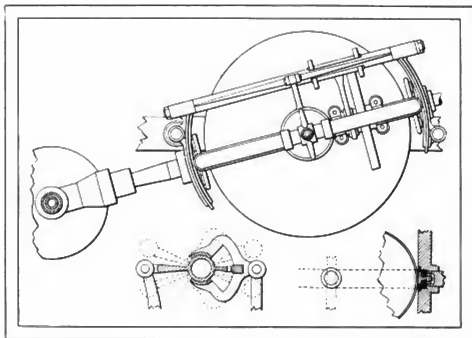
Peerless Motor Car Co., Cleveland, O.—Booklet descriptive of Peerless touring cars. It is printed on a light shade of opaline enamel in brown, black and red, and the display of cars and their mechanical features is given a touch of life by the appearance of one of the popular Peerless girls.

H. H. Curtiss Mfg. Co., Hammondsport, N. Y.—Covered folder showing the several patterns of Hercules motor bicycles. The one and two-cylinder Hercules motors are also listed separately.

United Motor Corporation, Pawtucket, R. I.—Descriptive catalogue of the Cameron air-cooled motor car, showing all of the constructional detail by well executed half-tone engravings.

Kirk Mfg. Co., Toledo, O.—Catalogue describing the Yale touring car. Its typographical conception is both unique and excellent on account of the printing of the type matter and illustrations of each page upon a blue tint block.

Motor Car Power Equipment Co., Milwaukee, Wis.—Booklet showing motors, trans-



MOTOR AGE

ELEVATION AND DETAILS OF COWLEN'S FRICTION DRIVE

mission gears, parts and a line of general accessories. One of principal sets shown is a vertical motor with transmission gear attached. A supplement shows by mechanical drawings the style of design and construction of the motors.

### TO MAKE 115 MILES AN HOUR

Some time ago one M. Bellamy, a French motor bicycle builder, announced that he was building a 165-horsepower car that would be a record breaker in speed as well as in size and power. The car is now finished and is on the road, although it has never been given a "let-out" speed trial. The frame is of pressed steel, the sides drilled to reduce weight. The wheel base of this car is 8 feet 3 inches and the motor is an eight-cylinder vertical engine placed in the usual fashion. It is of 182 millimeters bore by the same stroke, which is equivalent to 7 1/4 inches. There is an individual throttle in each inlet pipe close to the valve chamber, so that the cylinders may be cut out individually at will. Both high and low tension ignition systems are fitted. The radiator is of the ordinary cellular pattern and with the circulation maintained by a gear-driven pump. There is no speed change gear,

the transmission being direct to the rear wheels by double side chains from a countershaft driven from the clutch. The driver's seat is almost back to the rear axle and the steering column is set at an angle of about 30 degrees above horizontal. The car is geared to travel at the rate of 115 miles an hour, which would be a mile every 31 1/2 seconds. It is further estimated that the rate of fuel consumption would be 12 1/2 gallons per hour. It is said the machine has been sold to a Miss Hockenhall, an American woman. It ought to make a nice quiet park runabout for her.

### JONES DOESN'T PAY THE FREIGHT

Nashville, Tenn., April 4.—The recent raising of the freight rates on automobiles is not worrying local dealers to any great extent. They have made it their custom in the past to let the buyer pay the freight and they will continue to do so. It will come rather hard on purchasers, however, as most of the automobile factories and distributing centers are a long distance from this city.

It now seems probable that the party of local enthusiasts which will go to St. Louis in May to map out a route to that city will be made up of a half-dozen enthusiasts, riding in two cars. In addition Duncan R. Dorris, a local dealer, who planned the trip, J. C. Symmes, secretary of the Southern Electric Co., will also take a party in his Rambler. A couple of reporters on local dailies will be in the party and the trip will be written up and the proposed automobile encampment will be advertised.

The automobile may soon be just to a new use in Nashville. The New York Life Insurance Co.'s local office is considering the purchase of a machine for the use of its director of agencies. The suburban train service is so poor that it is almost impossible for a man to cover more than one or two towns in a day, but in an automobile he could get about much more rapidly and conveniently and in most cases at considerable less expense. If the scheme proves practical for the director, it is likely a number of other houses will purchase automobiles to be used by traveling men making the smaller towns.



THE BELLAMY 165-HORSEPOWER CAR

## NOTES FROM THE FOUR WINDS



EDDIE BALD LEARNING THE GAME

The Lowell, Mass., Automobile Club is figuring on holding a race meet this summer.

The municipal council of Spa, Belgium, has voted \$2,500 for the automobile week which will be held in July.

At the general assembly of the Automobile Club of Belgium, held in Brussels, 150 members were present and re-elected all the former officers.

Thirty-five motor cycles have been entered so far for the Paris-Bordeaux and return endurance run. The entries close April 15 and it is expected in Paris that the list will reach the half-hundred mark.

It was reported in Michigan papers that a fire at the Lansing factory of the Olds Motor Works had done considerable damage. The company says it was only a small blaze and that it will not interfere in any way in the production of Oldsmobiles.

The farmers north of Decatur, Ind., have pledged themselves to boycott all Decatur merchants who come into their territory in automobiles, because, they claim, motorists have killed so many animals and frightened so many people that they are a dangerous class.

The new 1/2-mile cement track at Milan, Italy, was inaugurated March 19 and 20, when a motor cycle meet was held and thousands of spectators crowded the new course. The Criterion race was won by Colombo, who covered the 31 miles in 43:38. Orini won the other event, a 10 kilometers race in which a dozen riders took part.

The Allgemeine Elektrizitäts Gesellschaft, of Berlin, has added 100 electric cabs to the vehicles already in use for this service in Berlin. After June 30 a hundred additional vehicles will be in service, according to a statement given out by the company. The company is doing a good business, which is quite the reverse of the condition of similar services in other European cities.

In order to keep up with orders and make deliveries promptly as specified several of the touring car factories are working both day and night. Among those known to be now running night shifts are the E. R. Thomas Motor Co. of Buffalo, N. Y., and the Packard Motor Car Co. of Detroit, Mich. Work at the factory of the Locomobile Co. of America, of Bridgeport, Conn., is also progressing rapidly

and the company says that all orders have been filled as promised and that very soon eighteen gasoline touring cars a week will be turned out and shipped to agents.

Mayor Charles E. Jackson, of Rockford, Ill., has sent a personal letter to thirty-nine owners of motor cars of the city, reminding them that the speed limit for automobiles is 8 miles per hour and urging them to comply with the ordinance to avoid drastic measures. It appears that the feeling of the greater part of the people of Rockford is not friendly toward automobilists on account of several narrowly averted accidents.

The life of an automobile racing man is not all glory, especially when the racing man is in the process of evolution. E. C. Bald, once the king of the bicycle racing game, is now in the course of construction that is intended to make of him a first rate track driver for the Electric Vehicle Co. Eddie is now working long, hard days in the factory at Hartford assembling Columbia cars and in other ways that are arduous learning as much as he can about the vehicles he is to guide on the track this summer.

The Antwerp Automobile Club, of Belgium, arranged a novel competition some time ago. It is called "la course a l'enveloppe," each competitor receiving a sealed envelope in which was given the name of a village located 10 or 15 miles away. The motorist had to drive to a certain place in that village, where he received another sealed letter bearing new instructions. All told, a distance of about 30 miles had to be covered before reaching the destination and the one who went through all the mysterious envelopes and reached the point first was declared the winner.

O'Gorman's Motor Pocket Book, published in this country by E. P. Dutton & Co., 31 West Twenty-third street, New York, is one of the recently issued hand books of British origin. Besides containing a lot of useful technical and popular information of interest to motorists it contains an extensive automobile dictionary of automobile terms which includes the equivalent terms in French and German. This is an important feature on account of the great internationality of motoring at its present stage. The whole contents of the book are arranged in dictionary form and the reference to a desired subject whether for purposes of translation or explanation is easy.

A consumption test was held at Cannes, France, March 16. Each competitor received 1 liter—2.113 pints of fuel and was to run his car until it stopped for want of gasoline. Zimany, on a Clement motor cycle covered a little more than 18 miles, and Inghibert, on a Peugeot motor cycle, over 11 miles. Two Renault cars travelled respectively 9 and 7 miles in the best for cars weighing from 880 to 1,430 pounds. In the best for vehicles weighing from 1,430 to 2,200 pounds, a Peugeot won the contest, running 7 miles, while a Clement and a Panhard were close second and third, each with a trifling over 6 miles to their credit. Three Robert-Schneider cars finished one, two, three, in the heavy weight class,

running respectively 4, 2 1/2 and 2 1/4 miles with a supply of 1 liter of gasoline.

The Automobile Club, of South Africa, with headquarters at Cape Town, has a membership of sixty.

An automobile race meeting is being arranged in Memphis, Tenn., and will be held on the Memphis Trotting Association's track.

Robert W. Slusser, of New York, who has been appointed resident manager of the N. A. A. M. at the Louisiana purchase exposition, has gone to St. Louis to enter on his duties.

Prospects for many sales in Springfield, Ill., are bright. About twenty-five applications for licenses have been made since the first of January. Those intending to purchase automobiles want the higher grade rather than the cheaper ones.

The Automobile Club of Genoa, Italy, was formed during the latter part of March, and eighty members were recorded at the first meeting. Engineer Sesarò Gamba is president. Marquis D. Pallavicini is vice-president, while several other noblemen are members of the different committees.

Mr. and Mrs. A. L. Riker will be among the New York division of the St. Louis tourists. They will drive the Locomobile which survived the Boston run of 1902 and the Pittsburgh tour of 1903. Mrs. Riker was the only woman to participate in the latter and won the title of "Queen of the Madlarks."

The automobilists of New Orleans, La., have made plans for a 5-mile speedway running from West End to Spanish Fort. It is possible that the horsemen of the city may join the motorists in an endeavor to make an arrangement by which the speedway will have a double path, one side being used for the automobiles and the other for horses.

Bellamy Brothers, of Grimsby, England, use a steam motor wagon for carrying heavy loads. The vehicle covers 35 to 45 miles daily with a full load, and requires only 1 ton of coke per week. The expenses for the service, including the help, amount to \$18 per week, whereas previously when eight horses were necessary to do the same amount of work the weekly expenses amounted to \$44.50.

Walter F. Flynn, of Youngstown, Ohio, has broken ground for the erection of his automobile garage, which will be located on the Wick property opposite the court house. This garage will be operated in conjunction with the automobile factory he recently established. Youngstown now has the Flynn plant, the Freclonia Mfg. Co. and the Youngstown Carriage & Wagon Co. as representatives of the automobile industry.

The stockholders of the Moline Automobile Co., of Moline, Ill., held their first meeting since the organization of the company a few weeks ago and the following officers were elected: President, William Gregory, Los Angeles, Cal.; vice-president, W. H. Vandeventer, secretary and treasurer, Rufus Walker, Jr. The company expects to turn out about fifteen machines by June 1, and to follow this with fifteen

additional by the first of each succeeding month. The expectation is that about 100 vehicles will be built during the present year.

Farmers in St. Louis county, Kan., intend to form an organization to regulate the speed of automobiles on the highways of the county.

The recent automobile show held in Manchester, England, was the first local English show at which automobiles were exclusively exhibited.

The American Motor League has moved its national headquarters from the American Tract Society building to the Vanderbilt building, corner of Nassau and Beekman streets, New York.

Alvan T. Fuller, Boston agent for the Packard and the Northern, says the Boston shows gave him business an unexpected impetus and that he can sell all the cars he can get. In fact, he is after some of the Packard cars promised to other agents, offering to buy them outright from the agents.

At the instance of the Automobile Club of Louisville, Ky., members of the board of public works and the city engineer made a thorough investigation of the condition of West Chestnut street, about which much complaint has been made, especially by motorists, and as a result it was decided to commence the work of repairing at once.

The Haynes Automobile Co., of Minneapolis, has taken a lease on a new building located at 44 South Seventh street, a few doors from Nicollet avenue. The new store is 150 feet long and leads into an alley which opens on both Sixth and Seventh streets. The new store will be provided with a large elevator for taking machines on the shop floor. Besides

handling the White steamer and other makes of automobiles the company will handle gasoline boats and do repair work.

Twenty-seven owners of automobiles of Racine, Wis., met a few days ago and organized a club with some thirty members.

At the meeting of the Association Generale Automobile, held in Paris March 21, 250 new members were admitted to membership.

At a meeting of the Rochester Automobile Club, of Rochester, N. Y., the following members were elected to office: H. S. Woodworth, president; John Barhite, vice-president; C. S. Garfield, secretary; Fred Graves, treasurer.

In connection with the show which will be held in Arras, France, a circuit has been arranged, called the circuit du Pas-de-Calais. The distance is to be 250 miles and the event is reserved for motor cycles and cars under 880 pounds in weight. The maximum speed permitted will be less than 19 miles per hour.

A story comes from Cambridge that the Harvard students, fifty of whom own cars, are contemplating building a racing machine of syadistic design and challenging the University of Pennsylvania students to build a machine the same way and race the Crimson flyer. The Harvard boys got the idea from George Cannon, a fellow student, who built a record breaking steam racer.

A Paris paper reports that a French judge recently dismissed the case against an automobilist because the gendarm could not positively tell the automobilist was coming toward him or was going the other way. In another case a gendarm said to the judge, who asked him to explain how he had figured out the speed at which the automobilist was going, that the man in the car was going so fast

that by the time he had taken out his watch for the purpose of timing him the motorist was entirely out of sight.

English trade papers have printed many stories lately about the increasing interest taken in automobile matters in New Zealand. The people are automobile mad and there are not enough vehicles on the market to fill orders.

Steps are now being taken by the owners of automobiles in Plainfield, N. J., to organize a club to advance and protect the interests of the sport. There are about a hundred automobilists in Plainfield and it is expected that the majority will join the club.

The first arrest of an automobilist in San Antonio, Texas, for alleged violation of the automobile ordinance was made last week. M. D. Brown, of Chicago, was the victim, and he was in charge of a Winston car belonging to Edward Heath. The case will be contested.

The Duke of Sutherland was elected president of the Automobile Club of Great Britain and Ireland, while the Earl of Dudley, lord-lieutenant of Ireland; the Earl of Onslow, British minister of agriculture; the postmaster-general, Lord Stanley, and Sir David Salomons, bart, were nominated vice-presidents. Lieutenant-Colonel H. C. L. Holden, superintendent of the royal gun factory at Woolwich, was named chairman.

A test is being made with an automobile for the conveyance of mail by the postal authorities of Cambrai, France. A motor car carries four mail carriers to different villages and then waits 2 hours at the last stop. The car then goes over the same road and stops to take the other carriers. In this way two mail deliveries are made daily instead of only one. The distance covered each time is about 22 miles.

## GOOD FIELD IN SOUTH AFRICA

Writing from Johannesburg, South Africa, a French motorist gives some interesting information about the market in that part of the African continent and the possibilities there are for business. "The number of motor cycles which are in use here is really extraordinary and the proportion is larger than the number of such machines to be seen in Paris and other important cities in Europe. Most of the motor cycle users have them exclusively on account of the time saved and not because it might be considered an agreeable pastime. The roads are not good in Johannesburg, and out in the country they are simply wretched.

"English, German and Belgian machines are in predominance, while those made in France are almost as scarce as French bicycles. The reason is simply this: Foreign manufacturers, except those of our country, have either an exclusive store or else an agent who has a large supply of machines and parts and thus is in a position to offer to his prospective customers a choice. Our makers have thought it unnecessary to send a complete stock, thinking probably the people down here buy outright the first thing that is shown them. The European living in Africa is particular and it often takes many hours to get him interested in a machine and then sometimes weeks before he finally purchases. If we Frenchmen

want to get a slice at this market—which we ought to be able to get, considering our prices and the quality of our machines—we must imitate the German, the Englishman, the Belgian by sending three or four machines of the same style and some of all the different kinds we make. We must have a supply of parts and appearances, as without them the public will surely not buy, because he makes it a condition in his transaction that in case of need of repairs they will be furnished immediately.

"Motor cycles cost from \$175 to \$250, and are of  $\frac{3}{4}$  to 2 horsepower. The  $1\frac{1}{2}$ -horsepower machines are the most popular; too high-powered machines are not wanted under any pretext. Easy going and not speed is the motto around here.

"In the automobile industry we are better represented, the majority of the cars in use being of French make. On the other hand, most of these vehicles were bought by the owners while abroad, and the majority sold here are English, German and Belgian. The same remarks apply to automobiles as to motor cycles. The other continental makers send a large stock and have fine stores, which of course attract the people. The few French manufacturers who are doing business here have only two or three cars, which the agent generally keeps at home, not even going to

the expense of renting a store and seldom attempting to seek business.

"I have no doubt that many French cars could be sold if we had proper representation, and I cannot lay too much emphasis upon this point. The cars made in France are in great demand and it is a pity we are making such a poor showing.

"There are many rich people here who would gladly pay the price for a first-class French machine, and I could name several who told me so. It would be advisable, and in fact it is necessary, to send some expert mechanics. It may seem that this would be a very expensive matter and unwarranted unless a number of sales would have been made in advance, but as there are only a few mechanics who understand our cars it can readily be seen that with the assistance of such men sales would be much easier.

"I have found there is a chance for some manufacturer to establish a transportation service between the town and the mining district. This would cover the carrying of passengers and of goods. Such a service is of imperative need and would yield a handsome profit. There is at present a Scott train which does similar service, but it is entirely inadequate. The duty on motor cars and motor cycles amounts to 10 per cent ad valorem."

"THE ARISTOCRAT OF AUTO CARS"

# FIAT

**Automobiles**

AND

**Auto Boats**

When You Drive a "FIAT" You

FIND  
IT  
ALL  
THERE



And Use Your Hands for Steering Only

There are no levers or handles of any description, either on the dashboard or steering pillar of this famous Italian car. Every function of the motor is controlled **absolutely** by pressure on the small foot-pedal shown above. As simple to operate as a stem-winding watch; as comfortable as a parlor car.

POSTER CATALOGUE MAILED FREE

## HOLLANDER & TANGEMAN

Sole American Agents

5 West 45th Street - - - - NEW YORK

Licensed Importers Under Seiden Patent



# MOTOR AGE

VOL. V. NO. 15

APRIL 14, 1904

\$2.00 Per Year

## FIFTEEN FINISH

## SERVICE TEST



**N**EW YORK, April 11—Fifteen of the seventeen vehicles which started in the A. C. A. commercial motor wagon trials last Monday survived the 6 days of service constituting the test. All the survivors made a showing for efficiency and rapidity of deliveries that cannot be gainsaid. A remarkable feature of the test was that there was but one case wherein there had to be an actual repair of essential machinery during the overnight stops in the garage. The Union Motor Co.'s truck had to have a connecting rod repaired on Thursday night. No other repairs were made to the other cars beyond mere oilings and adjustments.

Two starter alone—the Carlson Motor Vehicle Co.'s gasoline delivery wagon, No. 10; and the Consolidated Motor Co.'s Herschman steam truck, No. 18—failed to finish the contest. As stated in last week's report, the former was not completed until the morning before the contest and had to retire on account of overheated bearings. The Herschman truck through the neglect of an employee, had not been overhauled and was forced to withdraw because it did not steam right.

The express companies' officials decline at present to make any statement of results or give any expression of opinion of the comparative efficiency and economy of motor-driven and horse-drawn vehicles, as demonstrated by the tests. They will, however, enter fully into criticisms and comparisons in the statement they have agreed to prepare for the official report of the club's contest committee.

It will be remembered, though, that one of them was reported in last week's Motor Age as saying that the wagons for the most part were not

built with sufficient body capacity or convenience for the uses which the business of the companies demanded.

It was also noted that it was found impracticable for this reason for the express companies' shippers to load the wagons of each class uniformly to enable a fair comparison to be made. How widely varying were the loads of the wagons and, in fact, the loads that any one wagon carried in a single day may be seen from an inspection of the annexed summary of daily performances. It is hard to see, in view of this, how any fair tabulation of comparative results per ton, per mile, per day or per trip can be made. It would seem, therefore, that one would have to reach his conclusions of efficiency and relative merit by a study of the performances in detail rather than in toto.

That great rapidity of delivery and by inference from the almost utter lack of repairs needed, economy have been proven there seems little doubt.

Secretary Butler says that during the week of the test there were many inquiries made at the club as to the performance of the wagons, which would seem to indicate a very considerable and practical public interest in the test. The fine record of the Fischer gasoline-electric truck is reported to have won for its makers the reward of a large order from the Clausen Brewing Co.

Altogether the test seems to have been an eminently satisfactory affair, for while not permitting a close comparison of services rendered by the different vehicles, it was an excellent demonstration of the motor car's efficiency for such service; and in such demonstration of practicality of automobiles lies a greater good than in mere competition.





# A. C. A. TEST PERFORMANCES

## Record of the Last Half of the Week's Commercial Vehicle Service Trials—The Cars Carry Bigger Loads Than on the First Days—Many Service Stops Made on All Trips

The records of the wagons for the last 3 days so far as reported by the club's officials in advance of the contest committee's formal report follows:

### FOURTH DAY—APRIL 7—NO. 5

Charles Rockliff, No. 2—Route 4—Start 7:41; return 7:23; load 1,575 pounds; covered 37 miles; twenty-eight service stops.

Union Motor Truck Co., No. 3—Route 15—Start 8:23; return 6:30; load 2,700 pounds; covered 32 miles; twenty-five service stops.

Knox Automobile Co., No. 4—Route 11—Start 8:00; return 5:23; four trips; loads 490, 272, 155 and 162 pounds; covered 22½ miles; forty service stops.

Knox Automobile Co., No. 5—Route 8—Start 8:00; return 5:32; load 1,290 pounds; four trips; covered 47½ miles; fifty-six stops.

Knox Automobile Co., No. 6—Route 2—Start 8:15; return 2:00; load 1,670 pounds; covered 32½ miles; six service stops.

Olds Motor Works, No. 7—Route 12—Start 8:35; return 5:52; seven trips; covered 37 miles; thirty-four service stops.

Olds Motor Works, No. 8—Route 13—Start 8:00; return 3:20; six trips; varying loads; covered 24½ miles; twenty service stops.

Consolidated Motor Car Co., No. 9—Route 3—Start 8:10; return 5:25; five trips; load general merchandise; covered 32½ miles; forty service stops.

Pope Motor Car Co., No. 11—Route 6—Start 8:55; return 6:20; five loads; 340, 490, 590, 515 and 300 pounds; covered 23½ miles; thirty service stops.

Pope Motor Car Co., No. 12—Route 14—Start 8:15; return 7:10; covered 35½ miles; 100 service stops.

Lansden Motor Car Co., No. 13—Route 5—Start 8:13; return 6:30; loads 2,000, 2,000, 1,500 and 300 pounds; covered 26½ miles; twenty-two service stops.

Electric Vehicle Co., No. 14—Start 8:50; return 4:30; covered 35 miles; load 1,915 pounds; ten service stops.

Electric Vehicle Co., No. 15—Start 8:24; return 7:15; covered 34½ miles; loads 2,000, 3,300, 2,100 and 1,275 pounds.

Cantano Electric Tractor Co., No. 16—Route 11—Start 8:10; return 6:13; four trips; load general merchandise; covered 22½ miles; thirty-two service stops.

Fischer Motor Vehicle Co., No. 17—Route to Yonkers—Start 6:25; return 3:25; load 10,200 pounds; return laden with empties, 4,200 pounds; covered 32 miles.

### FIFTH DAY—APRIL 8

Charles Rockliff, No. 2—Route 5—Start 8:03; return 5:09; loads 1,100, 400 and 2,000 pounds; covered 22½ miles; twenty-six service stops.

Union Motor Truck Co., No. 3—Route 5—Covered 20½ miles; twenty-five service stops; carried four passengers; loads 2,500, 1,200 and 1,500 pounds.

Knox Automobile Co., No. 4—Route 12—Start 7:55; return 5:06; five trips; loads 200, 300, 97, 162 and 178 pounds; covered 25 miles; thirty-three service stops.

Knox Automobile Co., No. 6—Route 3—Start 8:02; load 975 pounds; covered 58 miles; forty service stops.

Olds Motor Works, No. 7—Route 13—Start 8:17; return 6:12; seven trips; covered 55½ miles; thirty-three service stops.

Olds Motor Works, No. 8—Route 11—Start

8:10; return 5:28; five trips; covered 27½ miles; fifty-six service stops.

Consolidated Motor Co., No. 9—Route 4—Start 8:25; return 5:35; four trips; thirty-eight service stops.

Pope Motor Car Co., No. 11—Route 13—Start 8:50; return 5:50; four trips; loads 300, 250, 478 and 695 pounds; covered 26 miles; thirty-four service stops.

Pope Motor Car Co., No. 12—Route 14—Start 8:10; return 5:50; four trips; loads 500, 400 and 125 pounds; covered 26½ miles; forty service stops.

Lansden Motor Car Co., No. 13—Route 7—Start 8:49; return 5:40; two trips; loads 100, 250, 600 and 715 pounds; covered 26½ miles; thirty-four service stops.

Electric Vehicle Co., No. 14—Route 2—Start 8:42; return 6:30; two trips; loads 1,500 and 2,000 pounds; covered 34 miles; sixty-six service stops.

Electric Vehicle Co., No. 15—Route 7—Start 8:20; return 6:45; three trips; loads 1,185, 3,000 and 400 pounds; covered 26 miles; forty-two service stops.

Cantano Electric Tractor Co., No. 16—Route 9—Start 8:25; return 5:20; three trips; covered 24½ miles; thirty-four service stops.

Fischer Motor Vehicle Co., No. 17—Route to Yonkers—Start 8:50; arrived Yonkers 9:18 without a stop; left Yonkers 11:13, arrived brewery 2:35; load going 50 half-barrels of beer; load returning 40 half-barrels of empties; covered 32 miles.

### SIXTH DAY—APRIL 9

Charles Rockliff, No. 2—Route 7—Start 8:25; return 6:28; three trips; load 350 pounds; covered 29 miles; thirty-two service stops.

Union Motor Truck Co., No. 3—Route 7—Start 9:02; return 4:14; load 1,700 pounds; covered 19 miles; twenty service stops.

Knox Automobile Co., No. 4—Route 13—Start 8:00; return 5:05; four trips; loads 104, 483, 176 and 243 pounds; covered 31½ miles; twenty-nine service stops.

## SERVICE TEST ROUTE SCHEDULE

ROUTE 1—Madison avenue depot, 8 a. m., to Jamaica, L. I., via Brooklyn bridge, 8 and 10 Fulton street; thence Dean street to 1400 Fulton street; Fulton street to East New York depot; Jamaica avenue to Jamaica, L. I. Returning via Richmond hill and Myrtle avenue to 106 Broadway office, thence via Williamsburg bridge to Madison avenue depot. Distance 30 miles.

ROUTE 2—Madison avenue depot, 8 a. m., to Flushing, L. I., via Brooklyn bridge, 8 and 10 Fulton street, 1129 Myrtle avenue; through Melrose street to Flushing avenue; Grand street and Brooklyn Heights railroad line, via Corona, to Flushing; returning via Brooklyn Heights railroad line and Grand street, to 106 Broadway, Brooklyn; then via the Williamsburg bridge to Madison avenue depot. Distance 25 miles.

ROUTE 3—Madison avenue depot, 8 a. m., West side transfer service between Madison avenue depot and West 125th street, stopping at 683 and 315 Columbus avenue in both directions and repeat. Total distance 14 miles.

ROUTE 4—Madison avenue depot, 8 a. m., East side transfer service between Madison avenue depot and 138th street, stopping at Seventy-second street and Third avenue and Eighty-sixth street and Lexington avenue and repeat. Total distance covered was 16 miles.

ROUTE 5—Baggage service—Grand Central station 8 a. m. First Trip—Leave Deep

place at 8 a. m., deliver baggage from Fourteenth street to Madison Inn, Fourth to Sixth avenues; West Broadway to Mott street. Second Trip—Leave Grand Central depot 12 noon; baggage to Pennsylvania railroad depot, foot of West Twenty-third street. Third Trip—Leave Grand Central depot 2:30 p. m.; baggage delivery to hotels, etc.; Fourth second to Tenth street; Fourth to 8th avenue. Total distance 14 miles.

ROUTE 6—Madison avenue depot, 6 a. m., Merchandise delivery, Fourteenth to Thirtieth street; Third avenue to East river. Repeat. Total distance 8 miles.

ROUTE 7—Madison avenue depot, 8 a. m., Transfer service between Madison avenue depot and 65 Broadway, making all offices south of Forty-seventh street; two round trips, then to office at Fourth street and Lafayette place to load to the depot. Distance 7 miles.

ROUTE 8—Madison avenue depot, 8 a. m., Merchandise delivery, from Forty-seventh to One Hundred and Tenth streets; Fifth avenue and Central park to North river. Repeat. Total distance 12 miles.

ROUTE 9—Madison avenue depot, 8 a. m., Merchandise delivery, Forty-seventh to One Hundred and Tenth streets; Fifth avenue and Central park, to East river. Repeat. Total distance 13 miles.

ROUTE 10—Madison avenue depot, 8 a. m., Package delivery, Twenty-third to Fifty-ninth

streets. Fifth to Seventh avenues. Repeat. Total distance 8 miles.

ROUTE 11—Madison avenue depot, 8 a. m., Package delivery, Fourteenth to Thirty-fourth streets; Fifth to Seventh avenues. Repeat. Total distance 6½ miles.

ROUTE 12—Madison avenue depot, 8 a. m., Package delivery, Fourteenth to Thirty-fourth streets; Second to Fourth avenues. Repeat. Total distance 6½ miles.

ROUTE 13—Madison avenue depot, 8 a. m., Package delivery, Houston to Fourteenth streets; Third avenue and Bowery to East river. Repeat. Total distance 8 miles.

ROUTE 14—Madison avenue depot, 8 a. m., Merchandise delivery, Fourteenth to Thirty-fourth streets; Seventh avenue to North river. Repeat. Total distance 9 miles.

ROUTE 15—Madison avenue depot, 8 a. m., Market delivery to Fulton fish market, bring load of fish from market to depot, then make trips between Madison avenue depot and 443 West One Hundred and Twenty-fifth street, stopping at 315 and 683 Columbus avenue in both directions. Distance 13 miles.

ROUTE 16—Madison avenue depot, 8 a. m., Market delivery of fish to Fulton fish market, bring load of fish from market to depot, then make trips between Madison avenue depot and One Hundred and Thirty-eighth street, stopping at Third avenue and Seventy-second street and Lexington avenue and Eighty-sixth street in both directions.



IN FRONT OF THE ALAMO, SAN ANTONIO

THE MOTORING PARTY IS E. HEATH AND FAMILY, OF CHICAGO

THE HOTEL MEXICO, SAN ANTONIO, TEX.

Knox Automobile Co., No. 5—Route 11—Start 8:00; return 5:42; three trips; loads 315, 100 and 450 pounds; covered 23¾ miles; fifty-nine service stops.

Knox Automobile Co., No. 6—Route 4—Start 8:15; return 5:30; four trips; load 1,000 pounds; covered 49½ miles; thirty-two service stops.

Olds Motor Works, No. 7—Route 11—Start 8:15; return 6:22; four trips; covered 38½ miles; fifty-eight service stops.

Olds Motor Works, No. 8—Route 12—Start 8:05; return 5:40; seven trips; covered 37½ miles; forty-six service stops.

Consolidated Motor Co., No. 9—Route 5—Start 8:05; return 5:02; three trips; first load 1,915 pounds; covered 21½ miles; thirty-one service stops.

Pope Motor Car Co., No. 11—Route 14—Start 8:35; return 7:20; loads 500 and 720 pounds; covered 40½ miles; fifty-nine service stops.

Pope Motor Car Co., No. 12—Route 13—Start 8:40; return 5:35; load 700 pounds; covered 29½ miles; thirty-five service stops.

Landsen Motor Car Co., No. 13—Route 1—Start 8:25; return 7:15; three trips; loads 1,970, 1,200, 1,200 and 770 pounds; covered 36½ miles; ten service stops.

Electric Vehicle Co., No. 14—Route 3—Start 8:25; return 4:51; three trips; first load 1,140 pounds; covered 33½ miles; twenty-one service stops.

Electric Vehicle Co., No. 15—Route 5—Start 8:05; return 6:40; three trips; loads 3,400, 1,500 and 2,500 pounds; forty service stops.

Cantomo Electric Tractor Co., No. 16—Route 6—Start 8:00; return 6:05; first load 1,690 pounds; covered 23¾ miles; forty service stops.

Wisher Motor Vehicle Co., No. 17—Route to Jamaica—Start 6:25; arrived 10:20; load 48 kegs of beer, weight 9,600 pounds, and five men; returned with 37 empties, weight 2,800 pounds, and six men; distance covered 32 miles.

### PASS GOOD ROADS BILL

Providence R. I. April 11—The good roads bill, which authorizes the appropriation of \$100,000 to be used in building highways in various parts of the state, has passed the senate and house, much to the gratification of the automobilists. The policy of building and maintaining state roads, which has been carried forward so successfully in Massachusetts and New Jersey, was commenced in Rhode Island a few years ago, and since that time short stretches of excellent roads have been built under the supervision of a competent engineer and the money which has just been provided will allow this work to go on for another year at least. The sum of \$125,000 was asked for by the state board of public roads, but politicians found that a cut had to be made in many estimates as the session drew near its close, and the good roads bill was one of those to suffer.

The Kana automobile bill, with its many frank amendments, has been buried apparently somewhere on the road between the house and the senate, and there were few mourners at the interment. In all probability nothing more will be heard of this measure, and there seems to be an opinion among automobilists that the move that was made primarily in the interests of political strategy will be of great benefit to all of the many followers of the sport of automobilism who enter the state. No open opposition has been offered by motorists to legislation, but there is a feeling here that it is almost unnecessary and that within a few years a law of this character would be nothing but an encumbrance on the statute books.

Some time ago a suggestion was made by President Julian A. Chase, of the Rhode Island Automobile Club that this organization unite with the Massachusetts Automobile Club of Boston in supporting a rendezvous somewhere between the two cities. It was said that such a place, suitably fitted up, would be a great convenience to all automobilists on the way from Providence to Boston, and as this is one

of the roads over which tourists from New York and other places along the Atlantic coast have to go on the way to the White mountains in New Hampshire and the Maine watering places, the number expected to take advantage of it would be considerable. Recently President Chase and the president of the Massachusetts organization have been making a personal investigation and have looked at a number of pieces of property that might be used for this purpose. When they have decided on a location they will probably obtain an option on the property and will then lay the whole matter before their respective clubs. The action taken by the American Automobile Association in New York last week in endorsing a plan for the amalgamation of that organization with the American Motor League is approved here by all who have followed the careers of the two societies. The Rhode Island Automobile Club is a member of the A. A. A., and some of the men now in the automobile industry here were prominent in the formation of the L. A. W. some years ago and they know the difficulties of managing such national clubs, and the recent move of the A. A. A. seems to them to be in the right direction. H. H. Rice, now the secretary of the Rhode Island Automobile Club, was one of those who opposed, when the A. A. A. was being formed, the plans then made for making it exclusive and he says that there would probably never have been a division in the ranks of the automobilists if a more liberal policy had been adopted in the first place. He says that there will be undoubtedly a very vigorous plan of action carried out if Isaac B. Potter becomes the secretary of the proposed American Motor Association and he thinks that the sport will be very much benefited by the change. Mr. Rice says that the new organization should have a membership of something like 40,000 in the next few years. Little Rhode Island will probably furnish as much enthusiasm to the square mile as any state and Providence is likely to become a strong American Motor Association center.

# MOTOR AGE

Published Every Thursday by  
THE TRADE PRESS CO.

1303 MICHIGAN AVENUE, CHICAGO  
Telephone Calumet 7011

New York Office, 114 West 18th Street.  
London Office, American Publication Bureaus,  
25 Manor Park Rd., Harington, N. W.



Entered at the Chicago Post Office as Second  
Class Mail Matter

Subscription, Two Dollars per Year  
Foreign Subscription, Four Dollars

Any Newsdealer may obtain Motor Age through  
the Western News Co., Chicago, or any  
of its branches, on a returnable basis

## POWERFUL TOYS

IT is becoming a fad among rich men to establish automobile racing stables much on the lines of horse racing stables, except that the gambling features of the latter are not possible. Fast automobiles are purchased and turned over to hired drivers to be raced for glory and cups. The owner gets the cups and the maker and driver of the car get the glory.

It is hardly possible to see how a man by simply playing the check book role becomes an active part of the automobile racing game. He may do it good by supplying entrants. Soon he will not be needed. What is in it for? Presumably not as a philanthropist, contestant or for personal credit. It must be for the sake of pride of ownership of a good thing. His racing success is his car; he paid for it. Some one also designed it, built it and drove it. He bought it. Like the child with a new toy hugged tightly, the right of possession is strong in him. It is his little fad to be the possessor of winners. It is more credit to be a Harkness, Bostwick, Vanderbilt and drive as well as own the mediums of the new speed sport.

Besides, when a man is nothing but owner, his racing chauffeur's name, not his, is likely to get the newspaper publicity of the thing.

## FARMERS AND MOTORS

ELSEWHERE in this issue of Motor Age is a picture of an Illinois farmer's wagon after a trip "to town." It is one of the best possible examples of the effect of poor roads on rural commerce. It is a picture that could be taken a thousand times a day in a thousand localities. It depicts ordinary rural travel as it is at certain times of the year. It presents an actual daily condition that exists all over the country. It represents the country's disgrace.

The farmer in the picture does not think this is a joke. He is tired of the kind of travel illustrated. He has had too much of it. He will present this picture to a good roads convention soon to be held at the Illinois state capital. He is a progressive farmer and knows the extent to which poor roads are wasteful of energy, time and money. But at the same time that such farmers as this Illinois man are crying out for decent roads other

farmers all over the country are spending all their power in crusades against modern means of transportation—against the motor car. Standing knee deep in the mud their forefathers stirred up on the way to market and which has never been settled since, hundreds and thousands of rural bigots shake their fists at all motorists with the angry cry: "You scare my horse; get off my highway!"

Yes, Mr. Farmer, it is your highway, and a disgrace to you who made it and have so jealously guarded it against improvement. But motorists will not keep off any more than did the cyclists you once ran into the ditch. The road is for all. Your mortgage has expired. Improvement in roads is just as certain as improvement in vehicles and the motor power which is revolutionizing vehicles will revolutionize roadmaking.

Automobilists are among the chief advocates of good roads. They seek to construct a system of highways that will do you, Mr. Farmer, more good than it does them. They are not your enemies. No bigotry can make them so. They are ready and anxious to co-operate with you. Shall your co-operation be given, begged, stolen or forced. It is up to you.

Once in a while an advertising agency kicks because it cannot get its "press notices" in trade papers. Here is a sample of the kind of "alush" advertising agencies often ask to be printed: "The immense business done at the plant of the — company is certainly evidence that this company is doing a wonderful business."

The first farmers' organ to awaken to the utility of the automobile in agriculture is the American Agriculturist and an editorial in the last issue presented the case very intelligently. It advised farmers not to turn up their noses at the automobile because its possibilities exceed all dreams.

In Chicago you must have a number. You can enjoy the city against forcing you to get a license. Without a license the city will not issue a number. Good chance for street fakery to introduce automobile tags at three for a quarter.

Now then, let's all learn to say it—Oobron-Brillio—Go-braw Brill-yee—the more than Mercedes car—the little 120-horsepower runabout with which Rigolly at Nice made five proud Cannstadt flyers look like 30 pennies.

New Jersey is exclusive. Automobilists may carry no numbers but Jersey numbers while in the state. This is the first time on record automobilists have been requested not to carry all the numbers they can tack on their cars.

The McHenry County Automobile Club, of Illinois, has one president, one secretary, one treasurer, one attorney and eight vice presidents. This is a handy way to satisfy all office seekers.



The commercial vehicle test under the auspices of the A. C. A. started in New York Monday, April 4. In their issues of last week the weekly automobile papers covered the story as follows:

The Automobile, of New York—Story of the trials on Monday and Tuesday.

The Horseless Age, of New York—Story of the trials on the first day, Monday.

Automobile Topics, of New York—Story of the trials on Monday and Tuesday.

The Motor World, of New York—Story of the trials on Monday, Tuesday and Wednesday.

The Automobile Review, of Chicago—Story of the trials on the first day, Monday.

Motor Age, of Chicago—Story of the trials on Monday, Tuesday and Wednesday.

Besides Motor Age only one paper published the story up to Wednesday night and that paper was a New York paper. Motor Age beat three New York papers on a important event in their own city.

No person would think of writing to a trade paper asking it to make, free of charge, a drawing and cut of some article of manufacture. Such a request would be foolish. The approved method is to write to the trade paper asking that the said article of manufacture be illustrated and described; then after the description appears, to write again stating that inasmuch as the cuts have served their first purpose and are of no more use to the trade paper, will it please donate them to the maker of the said article of manufacture. This method is more diplomatic, and besides, two birds are killed with one stone.

King Edward of England is said to delight in embarrassing "hobbies" by motoring in an unnumbered car that he may be halted only to tell the unfortunate policeman who he is. The king must be a distant relative of Colonel Pope.

Some Berlin automobilists have patent numbers which can be changed with lightning rapidity on the approach of a policeman. This is almost as funny as some of the jokes in the Fliegende Blätter.

If this Y. M. C. A. automobile school system continues to increase, the daily paper alleged jokers are apt to substitute chauffeur for Christian in the association's name.

The sad part of being an expert mechanic in an automobile factory is that one cannot have so much fun as a cheap chauffeur.

Hippodrome automobile racing was given a slap in the face at Memphis, Tenn., last week for wishing to break the snail-bath.

City parents all over the country have the spring fever. For that motor licensing they take a dose of Chicago injunction.

Ninety-five miles an hour by Mr. Bigd must have given Mr. Jentzky one of those awful headaches.



1903 Touring Car  
1901 Tonneau  
1898 Delivery Quadricycle  
1898 Runabout

1902 Touring Car  
1901 Limousine

1903 Chicago-New York Record Car  
1900 Runabout  
1899 Runabout  
1900 Runabout

# GLORY FOR GOBRON-BRILLIE

## Rigolly and Duray Clean Up the Nice Race Meeting—Much to the Disgust of Five Mercedes Stars, They Win the Speed Trials and the Two Rothschild Races and the de Caters Cup

Nice, France, April 1.—Flying kilometer in 23.35 seconds—85 miles an hour—the Mercedes dethroned—Gobron-Brillie king. This is the feature of the 1904 Semaine de Nice, ended today.

There was only a few hours of actual racing in the 2-day speed tournament which closed the week of touring, hill-climbing, floral parades and social gaiety. There were only eighteen contestants altogether in the speed battles, but the sport was swift and close, and the performers the continent's best. The spectators were many and enthusiastic and the whole thing was a quickly-made sensation in Europe—an motoring—a shattering of records and ideals and a making of new speed gods, nothing doing in the goddess line, Madame du Gast being among the absentees. Rigolly, with the new 100-horsepower Gobron-Brillie, was the star and three times yesterday he smashed the flying kilometer mark.

The triumph of Rigolly ranks him with the premier drivers of Europe in speed contests, and is also greatly to the credit of the makers of the Gobron-Brillie, who entered the automobile trade with the intention of sooner or later making the fastest cars in Europe. They have succeeded after a hard struggle with much older makers; they have produced a car which has travelled faster than any other automobile on earth. Much was expected of the new Gobron-Brillie, which, according to statements from the factory, is a 120-horsepower machine, originally expected to average about 88 miles per hour. In the three trials yesterday the car developed respectively 87½, 93¼ and 95 miles per hour. The record breaker was built for the purpose of competing in the French international car race eliminating trial, and should it make an equally good showing in that difficult road test, France should have an excellent chance of winning the much desired Bennett cup.

The Mercedes was given a severe whipping by this fast monster of Rigolly's, as well as by the new English Napier, brought over to test its speed. Five Cannstadt cars, with five of the world's best professional drivers, were entered for the meeting, and the French and English were uneasy over the outlook of battling Gobron-Brillies and one Napier against this quintet of famous speed merchants.

But Duray and Rigolly, on the Gobron-Brillie, cleaned up the program, between them capturing all the firsts and seconds, while Mark Mayhew, on the 100-horsepower Napier, beat the German out of third place in the two most important of the four events. This left Werner with two thirds as the only Mercedes driver to show. Even that fearful and wonderful Jenatzy swelled the ranks of the also-rans. After the races the Mercedes crowd suddenly remembered that their beaten cars were not of the latest pattern. The Napier, while not winning, made an excellent impression, and the wise ones put it down on their list of dangerous competitors.

Good weather favored yesterday's meeting. From early morning until the hour of the start of the races crowds of people thronged the ex-

tension of la promenade des Anglais, where the events were to be run. It was a select assemblage of well-dressed men and women, manufacturers and dealers, officials and nobility, many foreigners and a sprinkling of that variety of person known as the ordinary on-lookers. Gardemans and gardiens de la paix were plentiful to keep order and the affair was carried on smoothly.

The kilometer record was broken four times, and Duray, who held the previous record, which was 26.35 seconds, was able to bring the record down to 25.15 seconds with the same car. Rigolly, who made the other three cuts in the record, averaged a speed of 87½ miles per hour when he covered the distance in 23.35 seconds, 93¼ miles per hour in the trial in which he covered the kilometer in 24 seconds, and 95 miles per hour in the trial resulting in 23.35 seconds. If, instead of stopping at the end of the last kilometer, Rigolly would have continued to complete a flying mile at the same speed, the time for that one mile would have been 37.45 seconds, or a cut of 1.15 seconds of W. K. Vanderbilt's record of 39 seconds.

The old mile standing start record of 58.45 seconds, which was held by Rigolly, was broken three times, both Rigolly and Duray clipping off 5.15 seconds and Werner 1 second from the former mark. The astonishing feature in this event was that Duray, on Rigolly's last year's car, equalled the time made by the latter on his new machine.

These times furnished an interesting comparison with those of last year's tournament. Then Braun, on a Mercedes, made the standing start mile in 1:03½, while Hieronymus, on a Mercedes, won the flying kilometer race for the Rothschild cup in 31½ seconds.

The summary of the 1-mile standing start speed trials, in which, also, the flying start kilometer was timed, is as follows:

Motor bicycles—Tammigni, Marehand machine; mile in 1:07½; kilometer in :38. Lambergjack, Griffon machine; mile in 1:09, kilometer in :39½.

Motor tricycles—Tammigni, Marehand machine; mile in 1:15; kilometer in :43.

Voitures—Deletang, Passy-Thellier car;

mile in 1:42; the flying kilometer in 55.35. Voitures Legée—Dorand, Moss car; mile in 1:21.35; kilometer in 44.35. Neitham, Decauville car; mile in 1:33.15; kilometer in :48.25.

Voitures—Rigolly, Gobron-Brillie car; mile in :53.35; kilometer in :23.35. Duray, Gobron-Brillie car; mile in :53.35; kilometer in :26.35. Werner, Mercedes car; mile in :57.45; kilometer in :30.35. Jenatzy, Mercedes car; mile in :59.15; kilometer in :30.15. Fletcher, Mercedes car; mile in 1:01.15; kilometer in :30.25. Braun, Mercedes car; mile in 1:01.45; kilometer in :30.35. Mark Mayhew, Napier car; mile in 1:03; kilometer in :32. Warden, Mercedes car; mile in 1:03.35; kilometer in :30.25.

The summary of the speed trials of voitures for the second Henri de Rothschild cup, over 1 kilometer, flying start, is: Rigolly, Gobron-Brillie car, :24; Duray, Gobron-Brillie car, :26.35; Mark Mayhew Napier car, :28.35; Warden, Braun and Werner all on Mercedes cars, each :29.25; Fletcher, Mercedes car, :29.45.

The summary of the speed trials for the third Rothschild cup, over 1 kilometer, flying start, is: Rigolly, Gobron-Brillie car, :23.35; Duray, Gobron-Brillie car, :25.15; Mark Mayhew Napier car, :27.15; Braun, Mercedes car, :29; Werner, Mercedes car, :29.15; Jenatzy, Mercedes car, :29.35; Fletcher, Mercedes car, :29.45; Warden, Mercedes car, :30.25.

The only event on the program today was the hill-climbing test for the Heron de Caters cup. Two years ago, when the event was run the first time, Leon Serpollet won it on his famous steamer, doing the 1,000 meters on the 10 per cent grade in 59.15 seconds. Last year Rigolly won it, covering the kilometer in 50.15 seconds. Today his team mate, Duray, won the contest, which, however was over a distance of only 500 meters on the steepest part of the Pin hill, as it is familiarly called here. The same car with which his companion won the trophy last year was driven by him, and he covered the distance in 56 seconds.

The summary of this race is: Duray, Gobron-Brillie car, :26; Rigolly, Gobron-Brillie car, :27; Werner, Mercedes car, :28; Braun, Mercedes car, :28.35; Mark Mayhew, Napier car, :30; Fletcher and Jenatzy, Mercedes cars, each :30.15; Warden, Mercedes car, :32.35; De Caters, Mercedes car, :36.25.

Next, on a Peugeot motor cycle, covered the same course 1.5 second faster than Tammigni on a Marehand machine, making the 500 meters in 41.45 seconds.



MOTOR AGE

AUTOMOBILE CLUB RUN AT MELBOURNE, AUSTRALIA



## THE MERGER IS FAVORED

### Consolidation of A. M. L. and A. A. A. Meets Practically No Opposition—Potter Praised

New York, April 7.—Commendation of the common sense and courage of the conferees of the A. M. L. and A. A. A., which is to bring about the consolidation of the two into one grand national body, continues. It is practically unanimous save in one quarter, where personal prejudice and animosity are recognized by all as the sole grounds of persevering and peevish opposition to a move universally recognized as being for the weal of automobilism and automobilists in this country.

President Potter, of the A. M. L., has made enemies in his long career in national sport organizations, as was natural should be the case with such a hard, hustling fighter as he is. With the single exception noted, even his former bitterest critics are congratulating the new body in its requirement of such a successful recruiting sergeant and masterful organizer to take charge of this branch of the new association's work.

When Mr. Potter took up the L. A. W. presidency that body had but 70,000 members. When he quit the leadership to resume his law practice it had attained a membership of 103,000 and had a bigger balance left in the treasury than at any time during its history, despite the fact that it had out on loan to the state divisions \$13,000.

As Mr. Scarlett remarked at the A. A. A. meeting which approved of the merger he, President Whipple and John Farson had arranged, "If Potter be a wrecker then we wish he would wreck the A. M. L. as effectively as he did the L. A. W. by raising its membership of 30,000 to the high water mark of its history. His raising of the A. M. L. in one year from practically a new organization on paper to a body having members in forty-four states and over 600 cities and towns proves that Potter has lost none of his old-time enthusiasm and recruiting ability. The insinuations cast out by this long, last-ditch opponent of merger that the A. M. L. is made up largely of bicycle riders and other outsiders are refuted by the fact that 95 per cent of the A. M. L. members are automobile owners, despite the fact that the membership was thrown open to all interested in any way in the advancement of automobilism and the attainment of good roads. This is a larger percentage of car-owning members than ever some of the clubs have."

Mr. Potter, interviewed on the work and prospects of the new national body, said in part:

"In accordance with the arrangement made by the conferees, the A. M. L. is about to send to each of its members a concise, explanatory letter, stating the terms and purpose of the merger and asking each member to express his approval or disapproval of the amalgamation. I have no doubt that our friends of the A. A. A. are pursuing a like course.

"From many letters already received from A. M. L. members I may safely forecast the result, for these letters give practically unanimous consent so far as no one is concerned. Moreover, these letters, in many cases, are from those who are members of both organizations. As to the future work of the amalgamated

body I hope to confer with President Whipple as soon as the union is completed. From conversations already had with him and with others prominent in the A. A. A. I can say that our ideas as to the future scope of endeavor and general outline of recruiting and organizing work are in entire harmony.

"The adoption of the more comprehensive title, 'American Motor Association,' and the assumption of speed boat jurisdiction by its racing board, opens a wide and promising field for recruiting. The motor boat owners are as much in need of an organization to conserve their rights on the water as the automobilists are on land. Bills have been introduced twice in congress to compel them to employ licensed engineers, which defeats the whole idea of amateur pleasure and speed launching.

"Of most enormous value to the new association is the splendid work now being done by Augustus Post, who is a member of the national touring committees of both organizations, in arranging the routes and details of the grand tour to St. Louis. His work already has brought many inquiries by letter. The work done by the A. M. L. in the same direction



MOTOR AGE

PROVING IT IS HERCULES

will, of course, be used to supplement the results already attained by Mr. Post in the same direction. The secretary's office will give Mr. Post's committees every assistance in this great tour, which will be the first great accomplishment of the new national body and give it a valuable standing before the public and legislation in many states.

"When the amalgamation was under consideration all hands were unanimous that A. R. Pargindien and his associates were the only ones to be considered for an instant as the directors of national automobile racing. His administration last year did much to make the public realize the importance and usefulness of the A. A. A."

### HIGH TIME IN FRENCH CAR

Los Angeles, Cal., April 5.—Considerable merriment of late has been noticed about the garages over the escapade of two well-known chauffeurs. They took a big French car out of the garage at Pasadena Saturday night and drove it over to this city, where they picked up two women, who were wives of men at the races here, and in company with a sport with money to burn made a night of it, ending up at 4 o'clock Sunday morning with one of the women trying to run the car up the steps of a local bank building. A Los Angeles policeman arrested the outfit and the five were taken to the city jail.

## AUSTRALIA HAS PARADE

### Large Crowd of Motorists Drive Cars Through Melbourne and Near-by Towns—Americans Lead

Melbourne, Australia, March 2.—The first elab run of the recently-formed Automobile Club of Victoria took place a few days ago and the event is well worth reporting to an American friend on account of the rather large number of American-made motor cars which participated in the affair.

The weather man just happened to feel good and favored our community with a most enjoyable temperature, after several days of nasty, rainy weather. Nearly forty of the 104 members of the club had responded to the call of the secretary to be present at Prince's Bridge on Alexandra avenue at 2:15 in the afternoon, and while it might seem but a small percentage for a club which has over the hundred in membership, it is, nevertheless, a fair showing for a first event of the kind and the enthusiasm of the participants fully made up for the lack in number.

The crowd along the line of march was large indeed, if you know how skeptical the people are down here at running out of their way to see something they never saw and about which they are in doubt as to whether they will enjoy it or be disappointed. The cars proceeded through St. Kilda, East Brighton, Cheltenham, and Moradinloo, and Aspendale park, the end of the excursion, was reached at 3:30. There was no great speeding to get there, the intention being rather to make it as much as possible a show affair, a moving exhibition of cars moved without horses, and the success was complete in this direction, the people along the route being able to get a good glance at the different machines, and one could very plainly hear many remarks about the vehicles.

After a few hours of rest, during which a delightful lunch was served, most of the motorists present again formed in line and returned to Melbourne, which was reached about 6 o'clock.

Those who took part in the run were: Dr. A. P. Merrill, Winton; Otto Schmachner, de Dion-Bouton; W. J. Warden, Oldsmobile; F. Bennett, Toledo; Sydney Scott, Deaumeville; D. McKenzie, Oldsmobile; J. E. Crooke, Locomobile; Dr. B. Grimwade, Humbrette; N. Grimwade, de Dion-Bouton; J. Bewick, Locomobile; Dr. Officer, Oldsmobile; J. Moffatt, de Dion-Bouton; W. S. Rose, Argyl; H. Tarrant, Argyl; P. Moffatt, de Dion-Bouton; W. Hurst, Eclair; Frank Stuart, Deaumeville; E. C. Winn, Oldsmobile; F. McGinnis, Oldsmobile; H. Thomson, Thomson; J. Prince, Winton; C. B. Kellow, de Dion-Bouton; H. H. Whitt, Locomobile; W. Gould, de Dion-Bouton; S. Darby, Toledo; A. Renard, Robert; H. Stevens, Knowles-Aster; C. Bobinke, Oldsmobile; C. Waddington, Oldsmobile; H. J. Maddox, Knowles-Aster; C. A. Proctor, Orient buckboard; J. Neavo, Oldsmobile; Scott, Jr., Covent; and C. Hall, Oldsmobile.

The large number of American automobiles which took place in the Aspendale run must not be considered extraordinary, because the Yankee agents of the American manufacturers or the local agents handling their cars are pushing them for all there is in them, and furthermore they are lighter, of better appearance, and less expensive than English or French cars. The only strong competitor on the local market is the de Dion-Bouton, but the Oldsmobile is really the most popular car around here.



## CHICAGOANS FIGHT TAGS

### Automobile Club Takes Up Cudgel In Behalf of Its Members—Injunction Against City Is Sought By the Club To Prevent Enforcement of the Ordinance Declared Invalid

Chicago, April 13.—The Chicago Automobile Club has taken up the cudgels in behalf of its own members, and has swung the same with determination, the immediate object upon which the blow fell being the city's license and number-tag ordinances. The time for the renewing of the licenses seems to have come synchronously with the spring awakening of automobilism.

The attention of the city hall people was directed to the fact that many automobiles were running without licenses and without tags and determined to enforce the letter of the law—which the courts had called invalid—by wholesale arrests of the parties driving or owning machines.

Relief from this condition of affairs was suggested by the automobile club's attorney, Sidney S. Gorham, a member of the law firm of Mills, Gorham & Mills, who used the now famous Banker injunction against the city as the instrument whereby to attain the ends desired. On Saturday Mr. Gorham filed a petition before Judge Brown of the Circuit court asking the same right as had been granted to Mr. Banker when the latter won his injunction suit from the city nearly a year ago. The petition was granted for the following members of the club: John Farson, president; Dr. F. C. Greene, first vice president; I. M. Cobe, F. X. Mudd, W. G. Lloyd, F. C. Donald, T. J. Hyman, J. A. Ellis, directors; and F. H. Davis, W. H. Hoops, I. V. Edgerton, C. E. Bartley, H. Pam and Sidney S. Gorham.

As a matter of fact the above-named members are all that Mr. Gorham could reach over the telephone on Saturday, as it was necessary to have the personal consent of each individual before filing a petition in his behalf.

Today Attorney Gorham filed a bill of restraint on behalf of another club member, I. V. Edgerton, who was arrested yesterday for driving an automobile without a number. An injunction was issued against the city and now it is the intention to make other club members party to this bill in order to bring them under the effect of the injunction.

It is now proposed to file a petition on behalf of all club members. Notices to this effect have been sent to each member in the city. The club now proposes to secure for each and every one of its members immunity from arrest for the violation of what it considers an unjust and invalid law.

Mr. Gorham said yesterday: "The club has no idea of seeking to secure immunity from arrest for securing or otherwise breaking just laws, but merely relief from the license and tag regulations, which are not considered just, as at present on the books, and I think some system of registration of automobiles is proper and even desirable and that the city and club will soon agree upon some such method."

The injunction on which the Chicago Automobile Club rests its position was granted to A. C. Banker, dealer in automobiles, on June 9, 1903, and restrained the city and its board or agents from arresting or preventing the complainant or other persons similarly situated with him from running, driving or propelling an automobile within the corporate limits of

Chicago, without first having secured a license to do so."

Going a little farther back into the history of the case, Mr. Banker had had his license revoked for alleged too fast driving in the city. For that matter, Mr. Banker did not deny that he had exceeded the speed limits a bit, although that has little to do with the case. His license to operate an automobile was taken away from him and Mr. Banker, being a dealer, found it impossible to gain his livelihood without running an automobile.

So he took the matter into the courts and the courts sustained him.

There were two ordinances which had stood in the way of Mr. Banker and more recently in the way of the rank and file of motor car owners in Chicago. The first was the license ordinance, which was adopted June 30, 1902. This act compelled drivers or owners of machines to take out licenses for the same. The second was passed June 8, 1903, almost a year later, and stipulated that owners of machines must carry identification number tags, each to correspond with the number of his license.

The police say that they rest their case on the "livelihood" part of Judge Healy's decision in favor of Banker nearly a year ago, when that jurist decided that Banker could



EVANSTON BOAT CLUB

BOAT CLUB LEASED BY C. A. C.

not be kept from operating an automobile, as that would be "taking away a man's means of livelihood."

The situation seemed critical when on Monday Sergeant Ward of the vehicle department of Chicago had six detectives out "securing the city for violators of the ordinance," but none could be found. It rained Monday and this was given as the excuse, but inasmuch as there were plenty of untagged machines hurrying up and down Michigan avenue it must mean that Sergeant Ward's men themselves were afraid of the wet.

Attorney Gorham said yesterday he expected that he and Assistant Corporation Counsel Granville W. Browning, who has represented the city throughout in the matter, would meet in the near future and frame an ordinance which would fit the case and do injustice to neither side.

"The city should adopt an ordinance providing for the registration by owners of a description of their cars," said Mr. Gorham yesterday, "and the adoption of an initial or a monogram or some distinctive emblem which should be registered as the emblem of each

particular car. I believe it would meet with the hearty approval of the officers and members of the club who are entirely in favor of restricting the use of automobiles within proper and reasonable limits."

Just now while this legal movement is on foot, club members are desired to take out licenses and carry numbers to prevent an undue agitation until the club has done all it can to bring about an equitable settlement of affairs, and notices have been sent to all members to that effect.

Directors of the Chicago Automobile Club held their regular meeting at the club house on Monday. The efforts of Attorney Gorham in behalf of the club in the license matter were warmly seconded and that gentleman was forthwith elected secretary and a director of the club in the place of J. W. Duntley, resigned.

The directors approved the plan of the house committee for the leasing of the Evanston Boat Club house as a "sub-station" during the season. The new rendezvous on the north shore is a handsome, roomy structure and well furnished. A steward will be installed and every means taken to provide for the comfort of the automobilists. It is planned to have music by a capable orchestra at the new Evanston headquarters at least twice a week, and thus to make the trips along the Sheridan road and the north shore a distinctive feature.

The directors also approved the plan for the enlargement of the club garage. An awning, partly of asbestos, will extend from the present building out to the street entrance. It is thought that in this way the capacity of the garage for storage will be almost trebled.

The run to Indiana Harbor as the first trip of the year has been given up. The event was scheduled for last Saturday, but the bad weather and worse roads compelled the abandonment of the scheme. Instead, weather permitting, the club will go to Riverdale, stopping enroute at the home of John Farson, president of the club. It is felt that this will be an improvement all the way around over the proposed Indiana Harbor trip.

### SCHOOL IN DETROIT

Detroit, Mich., April 12.—The Y. M. C. A. automobile school project, which has sprung up in the land, was inaugurated in Detroit last evening when the first of a course of six lectures at the newly organized Association Institute Automobile School was delivered before a goodly audience by H. M. Coffin, of the Olds Motor Works.

Mr. Coffin selected the following divisions of the general subject for the first night: Outline and object of the course; a bit of automobile history; lines of development up to the present; stereoscopic views showing the evolution of the modern automobile; motive powers briefly; principle of the internal combustion engine; the four-stroke cycle and two-stroke cycle, and the advantages and disadvantages of each.

The five following lectures will take up the hydro-carbon motor in its various forms, and six styles of automobiles and engines will be exhibited. All the different machines manufactured in Detroit will be shown by experts from the respective factories.

Dr. A. G. Studer, secretary of the Y. M. C. A., says that this course will be only a preliminary one and that the association plans great things in the automobile line for next year. It is thought by that time to arrange for a full 5 months' course.

## LAST CALL FOR ENTRIES

### A. C. A. Extends Date of Application for Positions on American Cup Race Team—Race Talk

New York, April 13—Another chance is to be given American owners and makers to be represented on the American team in the international cup race. Following a meeting yesterday afternoon and conferences this morning the A. C. A. racing board announced that entries to the American team had again been thrown open and would remain open until May 1, when all the candidates must be on hand ready for inspection and trial.

The reason given for the reopening of the entries is that the withdrawal of the Sampson car left a vacant place on the team. This gave the committee the technical right to throw the entries open to supply a third member to the team. The committee declines to discuss the technicalities of the situation further and practically stands on its announced action alone. It says it does not propose to cross bridges until it reaches them.

There is a strong underlying confidence among the racing and manufacturing fraternity that the committee does not propose to have this country represented otherwise than creditably and will leave no stone unturned to send over a really representative team. It is suggested that the committee has perhaps received offers from other racing car makers to enter or at least has in mind one or more cars already built that trial might prove available and worthy of endorsement.

A hasty guess at possible entries would embrace the Winton Bullet, now proven a great speed machine; the Packard Gray Wolf, which holds the world's middleweight straightaway mile record; the Buick eight-cylinder car now in this city; the Ford 999, a record breaker; and the Smith & Mayble Simplex, now in course of construction.

Barney Oldfield is in town endeavoring to effect a reinstatement by the racing board of the American Automobile Association. He says he is sorry for his misdeeds and admits he made a mistake in riding at unsanctioned meets, but professes that his riding at Savannah, Ga., was merely an exhibition and that the Birmingham, Ala., meeting did not take place. He further protests that losing his position with the Winton company was punishment sufficient.

Oldfield, in discussing the racing situation generally, says that the Packard company offers to build him a new racer and that the Peerless company wants him to drive its car in the international cup race. The Peerless car, he says, is due to be finished today, while two other cars are well along in course of construction. Also, according to Oldfield, the Pope company has a racing Toledo nearly completed. Speaking of the Winton company, Oldfield thinks Winton will surely enter for a position on the American cup race team, now that there is another chance for such entry.

The prospects of quite an invasion of European drivers following the international cup race are promising. The proposed Vanderbilt cup contest is furnishing an additional inducement for a pilgrimage of the transoceanic cracks. When the course is officially announced as secured and the entry blanks are actually out, it will be no surprise to hear of more of the foreign champions crossing the pond. Fogolin, of

the Italian team, is here already and Lancini, his team mate, is said to be coming also as a driver of the Fiat cars for Hollender & Tange-man. The latest report is that Gabriel says he will come, if the Vanderbilt race be thrown open to the world.

Charles Jarrott, in a letter to "Senator" Morgan, says he too will be over.

"I hear that you people in America think that we of Europe cannot drive a car fast on a track because we have had no experience," he writes. "For my own part I think you wrong. In my cycle experience of many years, followed by my track experience with a motor tricycle, I gained an insight into the tricks of the track, and the management of an automobile will be rather easy, I am thinking. At any rate I am willing to try to show some of your American drivers a thing or two about track work, and am confident that I shall be able to do so."

William Wallace, of Boston, whose car of his own original design made an excellent showing at Ormond for a new machine, according to a report here, is expecting a 110-horsepower racer to be completed by June.

B. M. Shanley, Jr., who has bought the Vanderbilt Mercedes, is reported to have the track racing bee buzzing in his bonnet. This means a readiness to match the straightaway mile record holder against some of the new aspirants for racing fame, which argues some exciting sport on the circuit.

Chairman Pardonington, who is at work revising the racing rules, says that there will be many radical changes in them.

Senator Morgan says that a hitch has arisen in the building of the proposed race track in the White mountains through the opposition of the president of the Boston & Maine railroad which was to further the enterprise. The worthy president is opposed to encouraging the coming of automobiles to the White mountain district. Morgan says Colonel Pope and others of influence have promised to combat his arguments and point out the advantage to the railroad and the district of offering attractions to automobile tourists.

The Senator says further that C. G. Burgoine, president of the Florida East Coast Automobile Association, has written him that the association will not apply to the A. A. A. for a sanction for record trials on the Ormond-Daytona beach, preferring that all record making attempts be deferred until the annual meet next January.

It is reported in the Banker Bros. Co.'s branch that Louis P. Mooers has entered his new Peerless American team candidate in the climb at Commonwealth avenue hill, Boston, on April 19.

The Automobile Club of America last night raised the membership limit to 500, elected thirty new members and passed resolutions approving the merger of the A. A. A. and A. M. L.

### NEW ENGLISH ROAD RECORD

M. Carlisle and D. Whitehead recently broke the record which J. W. Stocks made in 1902, when he drove a 9-horsepower de Dion-Bouton car over the classical John-o-Groat's to Land's End road, from one end of England to the other. The new record was made in 52 hours 35 minutes, breaking Stock's record by nearly 10 hours. The actual running time was 45 hours 3 minutes, which is 3 hours and 10 minutes less than the previous mark. A 10-horsepower Argyll car was used.

## OLDFIELD QUILTS WINTON

### Latter To Have None but Amateur Drivers—Former May Drive the Peerless Cup Racer

Cleveland, O., April 12—Barney Oldfield has been released by the Winton Motor Carriage Co. For some time past there have been reports that Alexander Winton was not exactly suited with having his name and cars linked with professional racing, and it is claimed that of late Mr. Winton has been importuned by many of his friends and patrons to lend his support to the amateur rather than the professional side. The recent suspension of Oldfield by the American Automobile Association for competing in unsanctioned events threw the famous driver out of the running, so to speak, and on his return to Cleveland from Florida last week he and Mr. Winton had a heart to heart talk, with the result that Barney handed in his resignation. It is stated that the matter was settled on a basis satisfactory to both parties and that Barney received full pay up to the first of August, when his contract with the Winton company expired. Evidently this story is true, because at latest accounts Oldfield was sporting a roll of large denominations.

An official of the Winton company states that the company will continue to have an active interest in the racing game but that its cars will be driven by amateurs. It is probable that the larger Bullet will be used on the circuit this summer by Henry Owensby, a former Cleveland who now represents the Winton company in Washington and who has had considerable experience in racing. The other car will be operated by some one else. Mr. Owensby will probably go for straightaway records at Daytona, but it will not be until later in the season, as it is not intended that the racing game shall interfere with Mr. Owensby's business of selling Winton cars.

Immediately after his release by the Winton company, Barney Oldfield entered into negotiations with L. H. Kittredge and L. P. Mooers of the Peerless Motor Car Co. for the position of driver of the car which Mr. Mooers is building for the Gordon Bennett cup race. Oldfield has long had a banking to be one of the American team in the great contest this year and the failure of the Winton company to enter a car in this contest was a jar to Barney's bump of conceit, despite his assertions to the contrary. With the suspension of the American Automobile Association the Peerless company could not very well close a deal with Oldfield, so the matter is still open and Barney will take an early train for New York and offer an apology for taking part in the two unsanctioned meets at Macon and Savannah. If reinstated Barney will promise to be good and give the A. A. A. officials no cause for complaint in the future. As a secondary consideration to the Peerless connection, Oldfield is understood to be negotiating with Peter Cooper Hewitt, the New York inventor who is building a high powered racer.

An official of the Peerless company stated today that all reports to the contrary notwithstanding no driver had yet been selected to drive the Gordon Bennett car. Eastern papers have been naming a prominent eastern driver as the operator of the latest Peerless racer but it is stated positively that there is no truth in the story. He gave no definite assurance of Oldfield being engaged.

## CADILLAC PLANT BURNS

### Practically Whole Affair in Ruins— Only Few Cars Saved—Work of Rebuilding Begun

Detroit, Mich., April 13—The worst fire in automobile history occurred at 8 o'clock this morning, when the immense new plant of the Cadillac Automobile Co. was totally destroyed. A quarter of a million dollars is the property loss, but the loss from business will run much higher.

Six hundred men were employed and hundreds of these were forced to jump from second and third-story windows. Four men were seriously injured and one woman, an upholsterer, was thrown from a third-story window by her companions. Men tried to catch her, but only succeeded in breaking her fall and she was injured.

A portable gasoline riveting machine started the conflagration and so quickly did it spread that the man who ran the machine could not save his street clothing. An explosion of gasoline in the little forge caused a flame to shoot up several feet. This instantly communicated to the second floor and then to the third. Hundreds of men were at work here. In an instant everything was in a blaze and the men had hardly time to throw themselves from the windows.

Next door to the factory is an engine house, and this caught on fire. Twenty minutes after the engine companies arrived, all alarms had been turned in. They were unable to get water above the first story.

On the two floors above were hundreds of automobiles, completed or almost so. These went like tinder, while the men stood around helpless to save the results of months of their labor. The company had a well-equipped fire department of its own, but these men were driven from the hose lines in many instances.

Ten minutes after the fire started the entire building was in flames. Then the men in the office had to jump from the windows, for in a minute from the time of the explosion the flames had reached them. Many valuable papers were burned. Meantime the city's fire departments had been arriving, but the men stood around practically helpless. Three alarms had been turned in and twenty engines were on the scene, but nothing could be saved from the factories, for before the firemen arrived they were roaring furnaces.

Great clouds of smoke arose and thousands of people were attracted to the scene. These were kept a block away by fear of an explosion of gasoline. A rumor was circulated that 1,500 gallons were stored in the building. Even the firemen were anxious until it was found that the gasoline was stored in an immense tank 15 feet below the surface. Their work was hampered by floods of varnish, however. Time and again the firemen, as they stood in the area between the buildings, were scorched.

The center wing, the south wing, and the new building, which was completed only about 6 weeks ago, all went. Everything but one end of the original building fell inside of an hour from the time the fire started. So fierce was the heat of the flames that the firemen had hard work to save the engine house, which adjoined the works. Time after time it caught fire. Frequent little explosions of

heat or gasoline kept the people at a respectable distance.

The company's loss is enormous. The building and equipment were valued at \$200,000, but were covered by \$300,000 insurance. The loss will be big, as the company's whole business is badly damaged. Three hundred and fifty cars are all that are on hand to fill orders for more than 5,000. These were stored in another warehouse. Here also were about a thousand motors completed. The bodies were made in another factory and can be turned out without much delay. It is the small parts which were made in the foundry factory that will cause the most embarrassment, as it will be difficult to complete machines without them.

Since April 1 cars had been going out of the factory at the rate of twenty-five per day. Some of these, however, were stored on the floors above and are a total loss. Nothing better illustrative of the wonderful push of the company can be told than the fact that though this dispatch is written while the fire is still at its height, already preparations have been begun to renew work. General Sales Manager Metzger, President C. A. Black, A. E. White, the vice president; Lem W. Bowen, secretary, and W. H. Murphy, treasurer, were all on the scene early and when they saw that very little if anything could be saved they at once held a meeting and began laying plans for the renewal of work on orders. New machinery, new tools, everything, in fact, that could be needed to rush the work, were ordered within 2 hours after the fire started and buildings in various parts of the city will be leased at once, so that work can begin.

"We are embarrassed, of course, by the fire, because it means a delay on our orders, but we will be able to fill them with comparatively little delay," said General Sales Manager Metzger. "We got off a lot of machines the other day, fortunately. Even the new addition—one on which workmen are still busy—went with the rest of the buildings."

The employees of the company were set at work in the afternoon clearing away the debris and preparing for the erection of new buildings, which is to begin at once. It was found, after the ruins had cooled some, that the machine shop will be in condition to be started at once. The heavier machinery and much of the building where this was located was not so badly damaged as the rest. The walls and some of the floors are all right and this will be gotten ready for instant use. Men will work night and day. The loss is \$60,000 on buildings and \$140,000 on stock. After the officers got at the books this afternoon they said their greatest loss will be in not being able to fill immediate orders. They have orders for \$3,500,000 worth of automobiles on their books.

#### DISCUSS N. A. A. M. PROJECTS

New York, April 17—There will be two important meetings of N. A. A. M. committees held on Friday of this week. The N. A. A. M. show committee and a special committee of the Accessories and Part Makers' Association headed by President Post will confer as to better representation for the latter at future shows.

The committee on constitution and by-laws under the new incorporation will also meet. There will be no meeting, though, of the association at large to consider them until some time later, probably in June.

## MILWAUKEE HAS FEVER

### Dealers Estimate that the Season Will End with 500 Motorists and Double that in 1905

Milwaukee, Wis., April 10—Five hundred people in Milwaukee will own automobiles before the close of the present season, according to local dealers. At present it is estimated that there are in the neighborhood of 250 machines owned by Milwaukeeans. Local dealers predict that in two years there will be more than 1,000 machines in this city.

There is every reason for a resident of Milwaukee to become an automobile enthusiast. The city is noted for its excellent streets, its main thoroughfares being well paved, mostly with asphalt, while all the others are kept in the best possible condition. On all sides of the city there are fine drives and large parks. Should the motorist seek to test the merits of his machine further, the country surrounding is a network of the best roads in the west and in every direction there are resorts and pleasure places. To the north is Whitefish Bay, a noted pleasure resort which forms an excellent point of destination for a short spin. A little further in the same direction is Fox Point, where a number of the wealthier people of Milwaukee have their summer homes. Here there are excellent golf links, and during the summer dozens of parties make this the destination of a short trip, spending the day at golf. Many of those who have their summer homes at this place own machines.

To the west there are innumerable resorts. Oconomowoc, one of the best known places of summer homes in Wisconsin, is frequently the destination of the motorist. This little city is surrounded with small lakes that offer their shores for ideal picnic grounds and their waters for excellent fishing and boating. Waukesha, known as the Bethesda of the middle west, lies just beyond the county limits and is frequently visited. Muskego lake is another pleasure resort frequently visited and in the summer time there is a constant stream of automobiles to Pewaukee, where one of the prettiest lakes in the state is completely surrounded by handsome summer homes of wealthy Milwaukeeans. The golf links of Kenosha and Racine, together with their other attractions, frequently send the motorists upon a short southern trip.

The enthusiasm of the automobilist in Milwaukee knows no bounds. Despite accidents sometimes brought about by recklessness, they continue to be ardent lovers of the sport. The accidents are never productive of disastrous results and the owners of the machines claim they but add zest to the amusement. But one person has been killed by an automobile since the sport was first introduced in Milwaukee and in that one instance the incident was unavoidable.

Automobilists have succeeded in securing a modification of the rules confining the operation of the machines, doing away with a senseless ordinance limiting the use of warning appliances to gongs, and succeeding in having other requirements modified until they have reached a consistent point. There are no restrictions other than are absolutely necessary for the sake of safety and in all things motorists are allowed full liberty.

The Milwaukee Motor Club is progressing

fully and is now laying plans for a club house, either to be erected by the club or to be leased in a convenient locality. Active work has been commenced toward increasing the membership and it is expected that in a few weeks more the organization will be sufficiently advanced to carry out its plans.

A number of automobile dealers, and many prominent business men of this city, are planning trips to the world's fair at St. Louis this summer. It is expected that about a dozen machines will leave from here, including Peerless, Winton and others.

The Jonas Automobile Co. has sold to A. Bach of the Abel Bach Mfg. Co., a 20-horse power Peerless machine valued at \$4,000. Mr. Jonas has sold a dozen Peerless machines so far this season. The firm received a carload consignment of Autocars.

The C. G. Norton Automobile Co. has a new building in course of construction on Broadway, near Hiddle, to be occupied upon its completion as a storage, livery and repair place. The building will cost in the neighborhood of \$13,000. It will be 60 by 120 feet in dimensions and will be of unique style, resembling the old "wayside inn," being one story in height and having a sloping tile roof. The company expects to occupy the building about May 1.

The Knox Automobile Co., located on Wisconsin street near Van Buren, is having its show rooms enlarged by the addition of a one-story brick structure with dimensions of 68 by 80 feet, located to the rear of the present show room. The company now has an exhibit space of 1,800 square feet.

Orlando Weber, the local representative of the Tuleho, has returned from a trip through the east, where he visited several of the big manufacturing plants. Mr. Weber is enthusiastic over the prospects of the automobile outlook for this year.

The Bates-Odenbrett Automobile Co. has a building under course of construction just north of that now in use at 501 Broadway. The basement will have a cement floor the full length and width of the building and will contain machinery for the repair of automobiles. The main floor will contain the show room, office and waiting rooms, and altering room. The finish of the building will be in yellow pine. There will be an entrance for automobiles on Broadway, with a passage 12 feet wide, extending half the length of the building. The doors in the front and rear of this passage will open by electricity.

#### DEALERS EJECT OFFICERS

Chicago, April 12.—The Chicago Automobile Trade Association held its second meeting on Monday evening and took another step in organization. Twenty-one concerns were represented. Officers were elected as follows: President, Charles H. Tucker, of the Winton branch; vice-president, Walter Gibbons, Oldsmobile Company; secretary, F. J. Pardee, Pardee & Co.; treasurer, H. G. Sykes, Loconobile branch. An executive committee was also named, and consists of the officers and A. C. Hanker, J. Ollier and A. G. Bennett.

The next thing on the program of the association will be incorporation under the state law, after which will come an effort to secure better conditions for the trade in general, and especially as regards the license and numbering regulations.

## CHAUFFEURS ORGANIZE

### Frisco Drivers Form an Association with Good Objects in View—Trade Conditions Good

San Francisco, Cal., April 5.—The chauffeurs of San Francisco assembled recently and organized themselves in an association to be known as the California Association of Chauffeurs, Inc. Every garage in the city was well represented, and the meeting adjourned with an enrollment of forty-six charter members. At a later meeting the following officers were elected: President, S. H. Lewson; vice-president, A. R. Newcomb; secretary, F. J. Swentzel; treasurer, S. P. Jarvis; conductor, J. Larky; sergeant at arms, C. H. Anderson. The object of the new organization is to bring chauffeurs more closely together, to be able to render each other better assistance, to become better operators and mechanics, to protect themselves, automobile owners and dealers from the rampant, reckless drivers of whom there are so many in this city and who are a detriment to everybody and really of no use to themselves.

The trade is now on the boom and the season promises to be a banner one. The White Sewing Machine Co. reports many sales, while the Pioneer company has its hands full in disposing of Winton, Stevens-Duryea and Oldsmobile machines. No new models of the latter car have been received, but are due every day. Several car loads of Wintons arrived yesterday and have been delivered. Eight Stevens-Duryeas reached Frisco yesterday and six were immediately disposed of.

The Rambler Automobile agency, handling only the Rambler cars, received two car loads a week ago, and yet cannot get them fast enough. Cayler Lee, the agent for the Cadillac, is also out of cars and the West Coast Motor Car Co., which handles the Autocar, is also taking many orders.

While the dealers seem to have their hands full in booking orders, the renting business has become profitable of late. At present there is but one company which rents automobiles exclusively. The Automobile Transit Co. is its name. It has about twenty rigs for the purpose. The Scott & Blaaslee Co., of the Pioneer Renting Agency, has just added two large Winton touring cars to its staff, making seven in all.

Lyle Renney has been appointed manager of the Rambler Renting Agency, a new company organized last week for the purpose of placing a number of Rambler touring cars in service. C. O. Withelm is the latest to engage in the renting business in San Francisco, with a White touring car. Others engaged in renting White cars are: Ed Calef, Bert Dingley, W. F. Brong, W. S. Arnold and George Corey. Demonstration machines are also rented by the White Sewing Machine Co., while a number of French rigs are being rented by the Mobile Carriage Co.

#### STEAL BUFFALO CARS

Buffalo, N. Y., April 11.—Last fall automobilists were considerably annoyed on account of laprobes, lamps, horns, etc., being stolen from their cars, and there were also isolated cases where boys had run off with cars and left them in out of the way places. Since that time owners have taken the connecting plug with them when they left the car, and it was thought there would be no more trouble with mischievous youngsters running away with machines. The Buffalo boy is a piteous youth, and not-

withstanding the fact that E. L. Koons took the connecting plug out of his car when he made a call on Ashland avenue last Saturday evening, two boys who evidently have looked into automobile construction somewhat, made a connecting plug with a piece of tin and for several hours had fun running the car around, while Mr. Koons and the police were making diligent search. When the boys had all the sport they wanted they left the rig and early Sunday morning it was returned to the owner.

The executive committee of the Buffalo Automobile Trade Association held an important meeting at the Iroquois hotel Thursday evening. The success of this association has been the fact that no resolution has been adopted unless it has been unanimous, and something that will doubtless appeal to organizations of a similar nature occurred at this meeting. An application for membership has been made by a concern of retailers which has an office but no store. It was the sense of the meeting that this agency came under the head of a curbstone agent and for this reason the application was refused. There were a lot of curbstone agents in the early bicycle days, but it is something that was not looked for in the automobile business so long as the demand was greater than the supply.

The affairs of the defunct Morlock Automobile Co. were wound up last week. Two of the old stockholders paid sufficient money for the stock on hand to enable the trustee to pay the creditors 50 cents on the dollar, and as this was acceptable, the creditors were paid off and thus ends the last chapter of the Morlock Automobile Co.

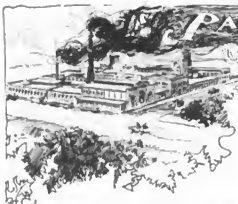
The dealers who are handling cars of repute all claim to be doing a very satisfactory business, but very few deliveries are being made. The trading of second hand cars is becoming a very serious question, and while the old dealers are doing little or no trading, new comers in the field are allowing fabulous prices for second-hand cars and also doing quite a lot of price-cutting. While this is causing some annoyance to the old houses, it is the consensus of opinion that this condition will not be of long duration, and while there are twenty-seven dealers at the present time, next season will doubtless find the retail field considerably less congested.

Two or three dealers are working the delivery wagon proposition, but there is very little business being done on account of the wagons not having enough capacity. There is a good field here for a big delivery wagon, but up to date no manufacturer seems to have filled the want.

#### AFTER CYCLE PATHS

Minneapolis, Minn., April 11.—Motorists of this vicinity stand a show to have one of the excellent system of cycle paths for which the twin cities are noted. Recently the cycle path commissioners have become discouraged over the agitation on the part of cyclists against an increase of price of cycle path yearly tags from 50 cents to \$1, the former price not yielding sufficient revenue to maintain the paths properly. The path commissioners are somewhat of a mind to throw up the job and let the paths become public property.

The owners of automobiles are awaiting just such an opportunity. A committee from the motorists recently called upon J. W. Taylor, president of the Cycle Path Association, and offered to take the path system off the hands of the commission, guaranteeing that every automobilist would pay \$25 a year for the maintenance and improvement of the paths.



## PACKARD CARS MADE AND BEING MADE

**W**HEN a man buys a Packard car he gets a machine that was made by workmen who toil in pleasant surroundings, for if there is one thing more than another which characterizes the new factory at Detroit, Mich., of the Packard Motor Car Co., it is the bright, cleanly and cheerful aspect of the different departments.

The establishment is laid out as a hollow square with windows on all eight sides, and should, by expansion, the buildings be raised, story after story, the lighting qualities would not be much impaired. Just now the whole factory is delightfully new and clean, but it is so arranged and its work so carried on that even years of work could not throw a great gloom over it. It is one of the new style of factories that are gradually displacing the old prison work shops which, especially in cities, and sadly enough, were common in all industries until the last decade. It is most fitting that the automobile industry as the newest great industry of the country should in its new factories add to the strength of the movement toward rational working places.

The Packard square has its gateway at the southwest corner, the two-story office being at the right of the entrance. At the left of the entrance is the power house. Extending away from these two extremities of the establishment are the different manufacturing departments, so arranged relative to each other that the processes of producing a complete automobile are progressive around the square, terminating in one of the two long, single-story buildings which lie in the middle of the inner yard.

The power house group, which forms the west side of the square, is flanked on both sides by railway tracks, the inner being a siding which runs along a covered platform. Hence this side becomes at once the receiving and shipping point, everything from coal wherewith to feed the boilers to light hardware for trimming the bodies, being brought to this portion of the factory, and the finished cars being here loaded onto outgoing cars.

The power house, of course, includes the boiler room. Back of this is the general stock room, then the blacksmith shop, and, at the extreme north of the west building, is the plating and polishing room. Here the corner of the square is open to allow the passage into it of the side track, and right in the corner is an underground reservoir for gasoline, which may be taken directly from tank cars.

On the south side of the square the first department eastward from the office is the lathe room; on the corner is the milling machine and drill press room, and north of this, in the east building, are successively the tool store room, the parts inspection room, and the finished parts stock room. The north room of

this building is the assembling room for motors and transmission gears. As this east building is of two stories, the upper floor, enumerating from the south end, is devoted to drafting room, private designing room of the mechanical engineer, experimental room, tool making room, pattern shop, tin and sheet metal shop, and wood working department. Getting down to the ground level again, the north building starts with the running gear frame building and running gear assembling room, which naturally joins the motor assembling room. Next to it on the west is the motor testing room, while this building ends at the railway switch opening with a repair shop.

The eastern of the two inner detached buildings comprises the painting and varnishing rooms and the upholstering department. It is connected by a covered walk with the other

servo to support water tanks, and as heating plants. Under the finishing building is an immense water reservoir. So much for the general lay-out of the factory.

The power plant is arranged to be easily increased without alteration, both in the matter of boiler and of engine. There are in the boiler room two 200-horsepower McNaul boilers, equipped with Detroit automatic stokers. They are placed at the east side of the room so that another pair may be, at any time desired, placed in line with them. The fuel room holds 200 tons of coal.

The engine room, like the boiler room, is much larger than actually required for the present power plant, and the engine and electric generator are placed so that another unit may be added, without change in the present arrangement. The engine is a 250-horsepower, tandem compound Ball engine, to which is directly connected a 150-kilowatt Western Electric Co. generator that supplies the current for lighting and for the various electric motors that individually drive the machinery of the respective departments. Thus there are motors in the lathe room, milling machine and drill press room, motor assembling room, chassis assembling room, plating and polishing room, blacksmith shop, rough stock room and finishing room. The machinery in the experimental, tool making, pattern, tin and wood working rooms, on the second floor of the east building, is driven by belts from the line shafts in the ground floor departments underneath.

The entire establishment is heated by a hot air system. In each of the two towers in the eastern corners of the square there are small steam engines which take steam from the main boilers, and which drive fans that circulate air through large overhead flues to each room. This air is taken from out-doors and heated by being drawn around steam pipes. On top of the towers are 1,000-gallon water tanks which are always kept full to maintain pressure for the automatic fire sprinklers with which the different departments are equipped. This fire protection is, of course, backed by the large reservoir under the finishing building, and by the usual fire pump that may be used to provide direct fire pressure in case of an extensive flame. In the northern of the two towers the



MOTOR HALL

MILLING MACHINE ROOM

inner building which is exclusively devoted to the final assembling or finishing, of the cars. From it the vehicles can be taken directly to the railway cars on the side track between it and the west building.

On the south and north sides there are general wash rooms, while several of the departments have also special wash rooms. In each of the two eastern corners are towers which



MOTOR HALL

THE LATHE ROOM

heating system is supplemented by a steam wood bending plant in conjunction with the wood working department. There is also an elevator in this tower.

The general wash rooms are hygienically, as well as conveniently arranged. They contain metal cages with locks which form individual lockers for the workmen, and long porcelain wash basins supplied with running water. One of these wash rooms is illustrated.

The manufacture of cars really begins in the southeast corner, on the second floor, where the mechanical engineer's private designing room, his experimental room, and the drafting room are grouped. The processes herein are more interesting to participate in than to witness or describe. Suffice it that the departments are conducted on a modern, systematic basis, even to the numbering and filing of tracings and blue prints. One of the most interesting features were its various products made public property, would be the huge blackboard in the

unassembled members of the pressed steel frames; and the unassembled wood parts of the artillery wheels. Finished stock includes raditors; imported induction coils; roller bearings for the front wheels, steel balls for the various ball bearings; springs for the vehicle; seat cushion springs; spark plugs and storage batteries; some of the gears used; tires; small hardware, such as used in body trimming; and rivets, bolts, nuts, etc.

Necessarily the idea department, the tool room, the pattern room and the purchasing department, are closely related to all phases of the factory, for much of the operations of one depends upon those of another or the others.

The blacksmith shop, the lathe room and the milling machine and drill press room are logically the first distributing points of both raw and semi-finished stock. As hinted above, the blacksmith shop handles about a third of the drop forging, and this branch of the work is considerable, on account of the fact that all

its semi-finished stock brought to final shape.

The finishing of parts includes much grinding; in fact it seems as if the amount of grinding in the Packard factory is exceptional. Most of this work is done on Brown & Sharpe universal grinders, and it includes the grinding of the following parts: The main drive shaft in the transmission gear; the driving clutch shaft; the motor cam shaft; the motor piston; the piston rings; the connecting rod wrist pins; the valves, valve stems and valve seats; the pins and rollers of the propeller shaft universal joints; the commutator box, roller and shaft; the steering gear worm shaft; the steering knuckle bolt, bushings and washers; and the cups and cones for the ball bearings in the rear axle and transmission gear and on the clutch shaft, and the seats for the roller bearings in the front wheel, fifteen bearings altogether, several of them double.

The cylinders are lapped with ground glass and oil, with the pistons which are to be finally



THE MOTOR AND TRANSMISSION ASSEMBLING ROOM



THE CHASSIS ASSEMBLING ROOM

designer's room, on which automobiles grow, life size, in chalk before they are made in any other way.

When the ideas that constitute the model of car to be produced, have left the blue printing frame their way part. Some go to the pattern shop, some to the tool making room and some to the purchasing department. Through the last named there is brought into the factory, stock that may be divided into three classes—raw, semi-finished and finished. The first predominates in quantity if not in variety. It includes bar stock for all turned work, raw stock for forgings; sheet aluminum, brass and iron; wood for body frame work, etc.; leather and hair for the upholstery.

The semi-finished stock would include copper piping, steel tubing and rubber hose; cylinder and piston castings, which are imported from Paris to get the advantage of French skill in this art; brass, aluminum, and iron castings for other parts; about two-thirds of the drop forgings used, these being made from the company's own dies the same as those forged in the home blacksmith shop where the minor portion of the forgings used are produced; the

of the parts of the mechanism in which strength is an object are drop forgings. Here also, tubing and piping is bent and trimmed and brazing and case-hardening accomplished. In the latter branch the company lays claim to a carefully studied process whereby gears may be case-hardened so that the middle un-carbonized portion will be exceedingly firm and tough, thus rendering the gears proof against the snapping of teeth under the constant hammering of such work as automobile power transmission.

The lathe and the milling machine and drill press room constitute the regular machine shop, being so divided in order to systematize the work. Each room, of course, includes all of the various modern machine tools of its class and the milling machine department also has a few odd tools such as planers, etc., which are not sufficiently numerous to warrant a separate department; while the drill room has a large cylinder finishing machine upon which cylinders are bored and finished without removal from their jigs. Practically all of the parts of the car's mechanism pass through these rooms, either as raw stock converted into parts, or

fitted to them. It is said that this ground glass lapping gives much more satisfactory results than lapping with emery or carborundum, and that after the glass has been used for a while it becomes reduced to a paste which no longer has grinding properties, and that hence should, in the washing out of the cylinder and piston after lapping, a minute amount of it remain, it would not have the cutting effect of emery left in cylinders after lapping with it.

As the performance of the machine work is all by gauge and templet, it necessitates a host of such guides to accuracy, as well as a large number of jigs, special tools for peculiar machine operations and special appliances for handling the work. Hence the tool making room, on the floor above, is a large department and kept pretty busy. The stock room for these tools adjoins the milling machine room on the north and is carefully and systematically kept to avoid abuse of the tools and their loss or injury through disorderly handling.

Parts finished in the machine tool rooms are sent directly north past the tool stock room to an inspecting department, where all pieces are carefully inspected and gaged. They are





MOTOR AGE

THE TOOL MAKING ROOM

then eligible for a brief rest in the finished parts stock room. From here they go directly to the motor and transmission gear assembling room, where the motors are put up, and the rear axle sets are made ready for attachment to the running gears.

Both motors and gears are assembled on stands, which are arranged in long rows on the side of the room, so that each workman has a bench space back of his assembling stand. The care used in putting these operating parts together is well exemplified by the weighing of assembled pistons and connecting rods, that all may be of exactly the same weight to afford a true balance in the four-cylinder motor. If a piston and rod set is over weight a little metal is taken off and it is not put into a motor until it is of the correct weight.

The motors, after being assembled and ready to run, are taken to the motor testing room on the west side of the chassis assembling room. Here they are given a double test, one under a prony brake load and one under an electric generator load. The motor is first tested on the dynamo and readings are taken for power developed at 700, 750, 800, 850, and 900 revolutions per minute. A similar test is made on the prony brake and here the motor is not supposed to be passable unless it develops 22 horsepower at 800 revolutions, it being rated at 22 horsepower at 900 revolutions. The average length of the testing of a motor is 15 hours, each being started in its test running on a load of 5 or 6 horsepower, and this load gradually increased until the maximum is reached.

From the testing room the motor goes back to the chassis assembling room, wherein the chassis main frames of pressed steel have been assembled and hand riveted, and the axles,

transmission gears, small parts, etc., attached. The frame assembling is done along the north side of the room, and when a frame is finished it is shifted directly across the room to trestles on the south side, where the attachment of the parts commences.

The assembled chassis, when it leaves this room, is ready for a road test on a pair of testing wheels. It then goes to the paint shop.



MOTOR AGE

ENGINE AND GENERATOR

where it is given the usual dose of a multiplicity of coats of filler, color, and varnish, nearly approaching in number of successive treatments the coating of the body, which has, in the meantime, come from the wood working establishment with its white aluminum sides to be made into a Rebelian like affair with cream-color striping. Several of the rooms in the painting building have signs on the doors, reading, "Passes not good here." This means that the constant opening and shutting of doors

and the consequent circulation of dust cannot be tolerated, for painting an automobile is one of the fine arts, and the cleanliness of it has a great deal to do with the degree of success of it.

Before the ladies receive their final varnish coat they go to the south end of the paint shop building, wherein is the upholstering department, where the dark blue leather is tufted over the hair and springs, and the other leather trimmings are put in place.

On the covered walk that connects the two inner buildings, the finished chassis and the finished bodies are taken to the finishing building, where they are put together and the things that have been made actually become cars—model I, Packard's—and the sales department is made happy.

The one department in the establishment which does not enter into this matter of evolution of raw material into vehicles, is the repair shop in the northwest corner of the enclosure. Just at present this room deals more in Packard history than in Packard present, for the cars of this year's vintage are too young to make its acquaintance, and the work in it is chiefly the putting into shape or remodeling of old, weather-beaten, single-cylinder cars which have been given the fifty-seven varieties of use and abuse. There is no power or machine tools in this department, as the machine work necessary in its accomplishments is done for it in the regular machine rooms of the factory.

The factory is now being worked day and night with two shifts of workmen. Moving from Warren, O., to a new plant meant much work and much delay, and being accomplished at the same time that a new model was brought out which necessitated new parts from steam to stera, the task of turning out this season's goods was no small one. The hard part was to get all of the standard parts for one car. With every part, from the smallest to the largest, once started through the factory and being turned into the stock room, the task of assembling into finished machines proved a lighter one, and the company has now a good start on its year's production.

The Packard executive staff is: President, J. W. Packard; vice-president, Russel A. Alger, Jr.; secretary and treasurer, Philip H. McMillan; general manager, Henry B. Joy; mechanical engineer, Charles Schmidt; sales manager, S. D. Wadlow; manager of manufacturing department, C. J. Moore; superintendent, William Gleason.

The foreman of the manufacturing departments are: Machine department, E. W. Dobson; lathe room, R. A. Shuet; milling machine room, E. A. Hammer; motor and gear assembling room, E. F. Roberts; chassis assembling room, F. A. Johnson; motor testing room, A.



MOTOR TESTING ROOM



MOTOR AGE

UPHOLSTERING DEPARTMENT



THE BLACKSMITH SHOP

bert Chappuis; plating and polishing room, G. E. Avery; blacksmith shop, Henry Pierce; stock room, R. H. Allen; drafting room, Russell Huff; tool making room, E. E. Menzies; pattern room, G. B. Scott; tin and sheet metal room, W. B. Hearst; wood room, F. J. Mohan; paint shop, E. A. Carpenter; upholstering room, J. A. Craig; finishing room, W. J. Birmingham; brazing department, H. J. Chapman; inspection of parts, G. H. Lamont; inspection of cars, R. H. Fishback; assistant to Manufacturing Manager Moore, F. R. Hunnigale.

The Packard model L is a 1900-pound touring car of 22-horsepower. It was designed with the intention of producing a speedy, light car for general purposes of automobilism, one which would be easily handled, stand hard work and climb steep hills. Hence it has about as low weight per horsepower as any car on the market. On the other hand this result is obtained by conservative design rather than by the adoption of delicate parts. For instance, the body is a comfortable tonneau of late European style, is made of aluminum over a light wood frame and does not add the weight to the running gear that does the ordinary Rol des Belges.

The car has a wheel base of 94 inches, with standard tread; the wheels are 34 inches in diameter, of the artillery pattern, the rear wheels having twelve and the front wheels ten spokes. Four-inch detachable tires are used. The front axle is tubular, 2 inches in diameter, with the usual downward bend in the middle to clear the fly wheel. Heavy jaw-style steering knuckles, which are brazed to the axle tube are used.

The steering spindle sleeve has attached to it the stub axle, which is carried by a socket on the front side of the sleeve, so that the wheel axis is ahead of the center of the steering knuckle. The bell crank, which on the right side, serves as operating connection for the rod from the steering gear and also for the cross steering rod, and the single lever arm on the other side, are attached to the inner sides of their respective steering spindle sleeves by outside sockets similar to those which hold the stub axles. The rod between the steering gear and the bell crank is attached to the latter by a spring cushion ball and socket joint, while ordinary jaw connections are used between the steering knuckle levers and the cross connecting rod.

The front wheels run on roller bearings. The

upper inner corner of each steering knuckle jaw piece is formed into an ear, or lug, which carries the shackle for the semi-elliptic cross spring, which has been used on all Packard cars except the model K. The rear springs are the usual semi-elliptics and are 42 inches long.



ONE OF THE WASH ROOMS

2 inches wide and of five leaves. The pump handles which support their shackles are bent outwardly to swing the springs outside the side bars of the main frame. Two adjustable distance rods extending from the front axle to the frame serve to retain the former in its

normal position, these being necessary on account of the cross spring used to give a three-point suspension.

The frame is of pressed steel and comprises two side bars and four cross bars, all of which are pressed by the Federal Mfg. Co., although the parts are assembled by the Packard company. All of the bars are of channel section. The side and two end bars are of the same section and are placed with the open side inward. The two intermediate cross bars are placed with the open side of the U downward. All of the riveted corners of the frame are braced by steel plates. The side bars at their middle portion are 4 inches high and 1½ inches deep. They taper towards each end and are also curved inward to make the front end of the frame narrower than the rear.

There is no sub frame for the motor, which is supported by cast arm extensions from its crank case, these fitting into pockets of pressed steel, which are attached rigidly to the side bars of the main frame.

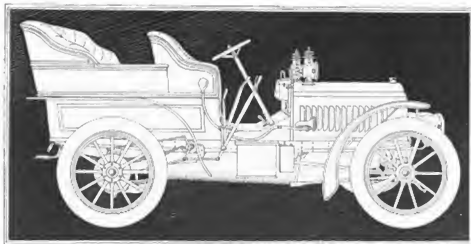
The motor is of the four-cylinder vertical pattern, placed in the approved longitudinal position in the front. The bore is 3½ inches and the stroke 5½ inches, the engine being rated at 22-horsepower at 900 revolutions. The cylinders are cast in pairs, with the heads, valve chambers and water jackets of each pair integral. Each pair of cylinders is secured to the aluminum crank case by six stud bolts, a filter gasket being interposed.

The crank case is in halves, ordinarily, but the supporting arms are cast onto the upper half instead of the lower, that the latter may be removed without disturbing the motor. To further facilitate this, the middle bearing of the crank shaft is entirely supported by the upper half of the case. In addition to the facilities for getting at the crank bearings by the removal of the lower half of the case there are two inspection doors on the side of the casing, these being especially handy in furnishing access to the cam shaft gearing.

Both the exhaust and inlet valves are mechanically operated from the same cam shaft, hence they are all in line along the left side of the motor. They are the same size and interchangeable. In the valve chamber extension of each pair of cylinder castings the inlet valves occupy the end positions, bringing the exhaust valves together so that the chambers below the valves may communicate. In this way there is only one exhaust pipe branch for each pair of cylinders.



THE BODY MAKING DEPARTMENT



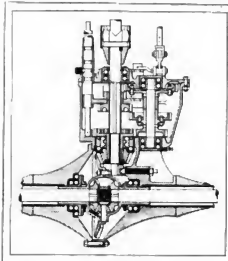
MOTOR AGE

PACKARD MODEL L.

The valves are made in one piece of nickel steel. Their diameter is 1 9-16 inches with 5/8-inch stems. Cupped washers resting on pins through the valve stems retain the valve springs. Steel guides for the valves are screwed into the chambers, while bronze guides for the push rods are supported by the crank case, the push rods being prevented from turning in these guides by suitable pins. The rods are, of course, provided with the usual cam engaging rollers. The cam shaft is driven by helical gears and is entirely enclosed in the crank case, having three bearings. The pistons have four rings, all being at the upper end. In the middle portion the diameter of the piston is reduced, presumably to lessen the frictional surface. In the lower end are two peripheral oil grooves. The connecting rods which are drop forgings, are finished all over and have bronze bushings at both ends, the wrist pins being fixed in the pistons.

The ignition is by the usual jump spark system, the spark plugs of which screw into the caps which close the inlet valve chambers. The commutator is enclosed and comprises a cylindrical casing lined with fiber, in which four metal contact plates are equidistantly imbedded. Extending radially from the shaft is a bracket on which is pivoted a lever arm that has a roller which presses against the inner

wall of the commutator casing, a short coil spring being used to maintain this pressure. The operation of the commutator is visible by



MOTOR AGE

PACKARD TRANSMISSION

means of a mica cover. It is driven by a pair of bevel pinions from the cam shaft, being placed on a vertical shaft at the rear end of the motor.

The regulation of the spark is by a lever, or

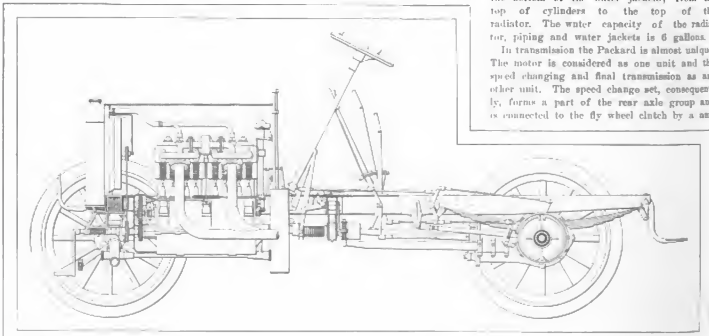
more properly a crank, on top of the steering wheel, which operates a gear and worm on the steering wheel post head to raise or lower a rod passing downward through the wheel post to suitable bell crank and rod connections with the commutator. The current for the ignition is supplied by storage battery cells carried in a box on the right step of the car and is utilized through a quadruple vibrator on the dash board.

The carburetor is of the ordinary float feed style with a spun copper float to regulate the needle valve. The chief peculiarity of the mixing chamber is the provision of a number of fine spray openings in an inverted cone, which in turn is within a conical spray seat. The air inlet is provided with a pipe which leads to the exhaust pipe, that warm air may be drawn into the mixing chamber. The carburetor being in the right side of the motor and all of the valves on the left side, a copper pipe extends from the carburetor upward and across the motor to the inlet pipe system, which is properly branched to afford an equidistant "draw" for each cylinder. In the end of this cross pipe is a chamber, whose throttle is thus operative upon all cylinders. The centrifugal governor on the front end of the motor cam shaft controls this throttle. The governor in turn is controlled by a lever on the steering wheel through the medium of a threaded block and a corresponding sleeve, whose upward and downward movement is transmitted eventually to other sliding sleeves on the outside of the steering post and thence to the throttle by suitable links and levers.

The lubrication of the motor is by means of a sight feed oiler on the dash, which includes a 2-quart reservoir, and the feed is forced by a single plunger pump supported by the motor and driven by a worm gear set and eccentric from the vertical commutator shaft. The motor is, of course, cooled by the usual water system, the circulation of which is effected by a gear pump on the front end of the motor crank case and driven by a helical gear from the cam shaft.

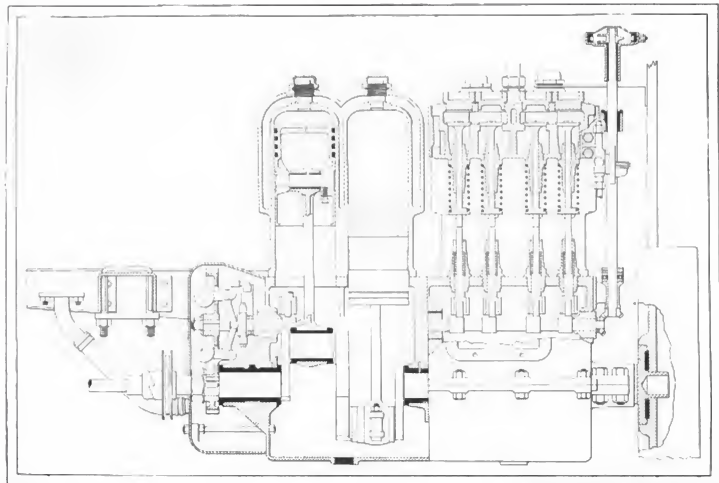
Whitlock cellular radiator is used. It is provided with a belt-driven suction fan. The direction of the water circulation is from the bottom of the radiator to the pump; thence to the bottom of the water jackets; from the top of cylinders to the top of the radiator. The water capacity of the radiator, piping and water jackets is 6 gallons.

In transmission the Packard is almost unique. The motor is considered as one unit and the speed changing and final transmission as another unit. The speed change set, consequently, forms a part of the rear axle group and is connected to the fly wheel clutch by a uni-



MOTOR AGE

SECTIONAL ELEVATION OF PACKARD CHASSIS



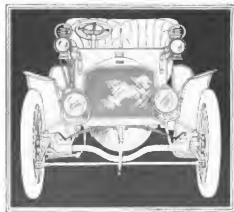
SECTION OF PACKARD FOUR CYLINDER MOTOR

versal jointed propeller shaft. The clutch itself is within the fly wheel, being of the expanding pattern. The clutch shaft is at its front end, supported in a bronze-bushed bearing in the extremity of the motor crank shaft, while its rear end is supported by a ball-bearing mounted on the running gear frame. A clutch drum with a portion of its rim cut out is rigidly fastened to this shaft and is surrounded by a leather-lined steel band secured to the drum at one end and to a bell crank at the other, the bell crank being pivoted on the web of the drum. On the sliding collar of the clutch shaft, whereby the operating connections are made between the clutch and the pedal, is a short gear rack which meshes with a square pinion on a composite shaft which is forked at one end to connect with the free end of the clutch band bell crank. Normally the sliding collar is forced inwardly by a coil spring on the clutch shaft, and this movement shifts the gear rack to rotate the spur pinion in such a manner that the right and left threaded members of its composite shaft will be forced apart. This action causes the bell crank to be turned so as to expand the steel band to cause it to grip the inner periphery of a concentric flange on the fly wheel. The clutch is consequently locked unless it is released by depression on the pedal whereby the sliding collar on the clutch shaft is drawn outwardly against the pressure of the coil spring.

The speed changing set is of the sliding gear variety, furnishing three speeds forward and a reverse drive, and is entirely enclosed within the composite casing which forms the rear axle structure. Ball bearings are used throughout this portion of the car's mechanism, and most of these bearings are of double rows of balls; in fact, all of them, except the

straight end thrust bearing behind the bevel pinion, which drives the bevel gear on the differential.

The main shaft of the transmission gear is coupled directly to the propeller shaft with its middle portion squared to receive two sliding gears. The rear end of this shaft is within a bronze bushing in a steel sleeve, on one end of which is integrally formed a spur gear and on the rear end of which is fastened the final drive bevel pinion. On the secondary shaft there are two fixed gears with either one of which the corresponding sliding gears on the main shaft may be engaged, the latter being moved by shifter rod manually controlled. The shifter rod is within a long bearing and has four annular grooves corresponding to its four different positions, each of which may engage steel balls pressed toward the center of the shifter rod by coil springs within small pockets.



MOTOR AGE

PACKARD MODEL 1.

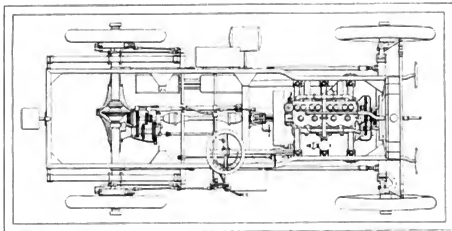
This ball and groove engagement is the operator's guide to the proper engagement of the gears when making changes. Two of the forward speeds are of course obtained by the respective engagements of the sliding gears on the main shaft with the corresponding gears on the secondary shaft, the transmission from the latter being through a fixed idle gear to the bevel pinion-carrying sleeve spur gear around the main shaft. The reverse is secured as ordinarily, by bringing an idle pinion on a stud shaft into engagement with one of the sliding gears and the latter's corresponding secondary shaft gear at the same time.

The high speed drive is direct and is obtained by bringing the rearward of the two sliding gears into engagement with internal teeth on the sleeve gear, whereby the main shaft, sleeve gear and bevel pinion are locked to rotate as one piece. The secondary shaft gears then run idly.

The differential gear is of typical bevel gear construction, upon a centrally divided live axle. The spur gears in the speed changing set are of No. 6 pitch and of  $\frac{3}{4}$ -inch face. The bevel pinion and gear are of No. 5 pitch and being of 20 and 52 teeth, respectively, give a direct or high speed final reduction of 1 to 2.6. The speed ratios of the low and intermediate speeds are substantially 1 to 4 and 1 to 10, while the reverse drive is the same as the low speed forward.

The rear axle is  $1\frac{1}{2}$  inches in diameter, being of solid steel and is incased within a steel tube 2 $\frac{1}{2}$  inches in diameter, which is fitted into the aluminum differential gear case, the joint being braced by webbed sleeves, which are flanged and bolted to the aluminum casing.

There are two independent brake systems,



PLAN OF PACKARD CHASSIS

Thus far the proposition has not assumed tangible form, but the gentlemen to whom it has been branched are thoroughly interested and have confidence in its possibilities. Mr. Bick claims that it will only be a matter of a few years before such highways will connect all the important centers of the country.

#### BUSY AT HARTFORD

Hartford, Conn., April 11—President Vreeland, of the Metropolitan Traction Co., and Harry Payne Whitney, directors of the Electric Vehicle Co., have been at the plant during the week looking over the work that is now in progress. The comments of the directors were favorable to the administration of President M. J. Rudlong. They expressed themselves as well pleased with the way the product is coming through, and were delighted that the orders were so great as to warrant the operation of many departments 24 hours a day, and that all departments were running late into the night.

While in Hartford they were put up at the Hartford Club, and they enjoyed a number of short rides into the country about Hartford. Mr. Whitney drove one of the big new cars over the Taleott mountain fastness, made bad by the frost coming out of the ground and the April rains.

Work is now going forward at the factory on an order for four electric cars for Andrew Carnegie, an opera bus, landau, brougham and Victoria. The cars are to be completed and delivered to Mr. Carnegie's new \$20,000 automobile stable in New York by the first of September.

The country about is being traversed by a large number of test cars. The Pope Mfg. Co.'s force now includes eight test men who are running Pope-Hartford cars with special test bodies about the county, day and night. The product is said to be coming fast and that there will be no trouble about making deliveries.

George E. Sykes, of Rockville, Conn., is to make a honeymoon tour of Europe in a four-cylinder Columbia touring car, special equipment for which is now being fitted at the Electric Vehicle Co.'s factory. Sykes will attempt to cover the itinerary so charmingly described in *The Lightning Conductor*. While many of the electric vehicles made in Hartford have been shipped to Paris and London, Sykes' car will be the first of the Hartford-made gasoline cars to be operated in the camp of the enemy.

both of which act upon the rear wheel hub drums, one comprising external band brakes and the other internal expanding brakes. The former are operated by a pedal and the latter by a side lever, and both systems are interlocking with the clutch. There are two other side levers, one for the forward speeds of the transmission gear and the other for the reverse.

The spark lead and throttle control are, as previously explained, manipulated by levers on the steering wheel. The muffler is double, consisting of an expanding chamber and a silencing chamber. The first is a simple cylinder, through which the exhaust gases pass on their way to the other chamber which has two concentric compartments with perforated walls.

The body and bonnet of the car are of aluminum, the former being built over a light wood frame from sheet aluminum stock. The fenders also are of sheet aluminum. The front seat is divided and the tonneau provides two corner and a door seat. The body is finished in dark blue, striped cream color. The running gear is a light yellow, striped in blue and black.

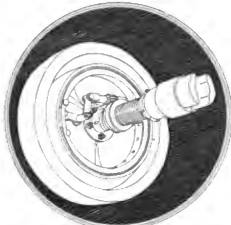
#### PLANS AUTOMOBILE ROAD

Cleveland, O., April 11—An automobile highway from Cleveland to Toledo is the proposition which has been branched to several prominent Clevelanders by J. N. Bick of Toledo, a well-known contractor and builder of electric and steam railways. Mr. Bick is at the head of the Toledo Motor Car Co. of Toledo and is an automobile enthusiast of the first water, as he uses his car practically all the time in construction work. Recently Mr. Bick unfolded his scheme to a party of Toledo and Cleveland gentlemen, and although it was deemed rather radical at first, they were forced to admit after hearing the promoter's explanations that the proposition might not be altogether impractical.

Briefly Mr. Bick proposes to build a 20-foot highway from Cleveland to Toledo by way of the larger towns, the distance being about 118 miles. The road would be of cheap construction and would be built on private right of way, with bridges over all highways and railroads. Brick would be used for the surface and timber for the bridges. Little grading would be required because with good surface an automobile can surmount any reasonable grade; in fact, the only expensive essential of the road would be the providing of good drainage so that the surface could be kept even.

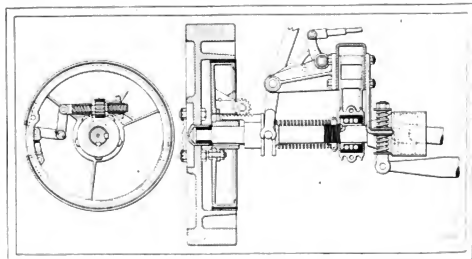
Mr. Bick figures that such a road could be built for about \$80,000 per mile, including right of way, or about \$900,000 for the entire road from Cleveland to Toledo. The cost of main-

tenance of such a road would be practically nothing, and the only heavy expense would be the interest on the investment. Mr. Bick believes that tolls alone would yield an excellent revenue. Automobileists from all parts of the country would frequent the highway and many people who do business in the two cities mentioned would use automobiles in preference to



PACKARD CLUTCH

taking a train and would be willing to pay a reasonable toll for the privilege of using the highway. In addition to this Mr. Bick claims that an automobile bus line would be a source of good revenue. The electric line between the two cities now makes the run in 4½ hours, and Mr. Bick claims that high speed automobiles could lower this mark considerably, making them a desirable mode of transportation between the two centers.



MOTOR AGE

ELEVATION AND SECTION OF PACKARD CLUTCH

# NEW YORK GARAGE GOSSIP



Hollender & Tangeman will give their first boat a public time trial over a measured mile at Bayonne, N. J., this week.

A three-cylinder Thomas car containing several improvements over those exhibited at the shows has been received by Woolston & Brown.

The vogue of the Orient buckboard is on the increase. E. J. Willis, the local agent, reports the sale of eleven of the little fellows last week.

The fine work the Knox, Olds, Columbia and Pope-Waverly delivery wagons did in the A. C. A. test caused many inquiries for them at the agencies last week.

The American rights for a French non-skidding and non-puncture tire shield has been secured by the F. A. La Roche Co. The head of the leather shield is studded with iron knobs. Mr. La Roche says he saw a cab in Paris, whose tires had been run for 2 years without reconditioning.

The American De Dietrich Motor Car Co. has moved into its new garage on Thirty-fourth street formerly occupied by the Auto Import and Waldorf Automobile companies. Five 30-horsepower cars have been received and the first shipment of an order of twenty-seven from 40 to 50-horsepower are on the way here.

The rapid completion of the subway is a matter of joy to Manager Plummer, of the Locomobile garage at Seventy-sixth street and Broadway, on account of the consequent fact that for the first time in several years the street in front of the repository is in good traveling condition, and this naturally has a considerable effect upon business.

E. J. Phelps, who has charge of the Phelps Motor Vehicle Co. branch just opened on West Thirty-eighth street, says the demand for demonstration of the 20-horse power three-cylinder touring car is already large. The fame the Phelps won last year in Mount Washington and in the Eagle Rock, Orange and Commonwealth avenue, Boston, climbs has made the car well known and easy of introduction to New Yorkers.

It is said that Eddie Hall, who is now studying the construction of the Columbia cars is a workman in the Electric Vehicle Co.'s factory at Hartford with a view to driving a racing machine on the track later in the season on the completion of his apprenticeship, will be installed as a salesman and demonstrator in the New York branch until the racer is ready for him to take the helm. The former bicycle champion enjoys a large acquaintance and great popularity among the horsemen and general sporting fraternity, which will give his "say so" much weight to say nothing of the mention of personal favor.

L. A. Hopkins, manager of the Brooklyn Automobile Co., which has garages in New York and Brooklyn and the wholesale agency for an adjacent territory including Philadelphia and Connecticut for the Haynes cars, has returned from the Kokomo factory. He says the output has been increased from forty-five to sixty per week. The Haynes is very popular in this district and hitherto the supply has far from equaled the demand. Last season his company could get but one-half of the cars for which it contracted, and had to return 23 per cent of the deposits received on orders.



Regular shipments will now permit the giving of a money guarantee of delivery.

Mr. Landon, of the Standard Automobile Co., gave a mounted copper a deserved call down the other day. He was demonstrating a car on Fifth avenue to a prospective purchaser, when the policeman rode up alongside and began to berate him and threatened him with a \$50 fine if he did not slow down. After depositing his customer at his destination Mr. Landon drove back up the avenue and hunted up the policeman. "Don't you dare to ride by me and threaten me again," said he, "or I'll report you to Commissioner McAdoo. I was trying to sell a car to a customer and you were doing your best to disgust him with automobilism. If I was exceeding the speed limit it was your duty to arrest me. You had no right to annoy me by threatening me." The copper rode sheepishly away.

The New York Electric Maintenance Co. has recently added an automobile department, which is located at 157 East Fifty-fourth street. The maintaining system includes storing, charging, ordinary repairing for which a specified monthly amount will be paid. This will enable the owner of an electric car to know exactly what it will cost him to maintain his automobile. Many automobilists have already made contracts with the company and they seem well pleased at the arrangement which will do away with a great deal of bother in the way of settling bills every once in a while. The company takes care of the storage batteries in a scientific way, it claims. Every week each set of batteries is taken out of the vehicle for inspection and the temperature, specific gravity and voltage of each individual cell is tested and remedies if any trouble is found.

Motor boats and automobiles are becoming inseparably merged, both from the standpoint of sport and trade. In the garages of the coteries of importers and makers, the gossip these days is almost as much of the water as of the land. The new sport has been taken up by tradesmen of repute and means, who seem likely to see to it that it has an imminguration that will insure public enthusiasm and confidence. Hollander & Tangeman opened the trade campaign by showing an eagerness for public demonstration through speed trials and to this end issued challenges and made a notable match, which is to be decided at Larchmont in June. Smith & Mabley promptly accepted the challenge and further by suggesting an open race, in which the first importers readily acquiesced. Smith & Mabley have taken another step further toward the protection of purchasers practically ignorant of the new game

and at the mercy of the trade at this early stage of the new sport. It takes the form of a signed and indisputable guarantee to even the speed of all boats bought for racing purposes. In these purchases miles per hour mean hundreds of dollars in value just as seconds per mile do in the case of trotters. They agree to guarantee a fixed number of miles an hour to be shown in a time trial on a recognized mile course. If the guaranteed speed be not attained the purchaser may have his deposit returned and be released from his contract. On the other hand, though, he must pay a bonus of \$125 for every mile scored above the guaranteed speed.

## RECENT INCORPORATIONS

Buffalo, N. Y.—Star Automobile Co., capital 10,000. To manufacture automobiles. Incorporators, Daniel B. Driscoll, Elmer E. Chambers and Daniel Burmaster.

Columbia, S. C.—Orangeburg Automobile Co., capital stock \$1,500. To sell and repair automobiles. Incorporators, A. C. Andrews, John McNamara and W. C. Wolfe.

Baltimore, Md.—The Larrimore Top Co., capital stock \$15,000. To manufacture automobile and buggy tops. Incorporators, George Ewalt, Robert N. Larrimore, W. Harry Ewalt, Thomas R. Ewalt and G. Latrobe Ewalt.

Railway, N. J.—Commercial Truck and Power Co., capital \$50,000. To manufacture automobiles, air compressors and boilers. Incorporators, Henry A. Grube, Henry R. Lamphear and Fred C. Heyer.

Middletown, Conn.—Swan Mfg. Co., capital \$50,000. Incorporators, William J. Swan, of Middletown; Frank H. Harrisman of Hartford and Z. E. Dowd of Meriden.

Cleveland, O.—American Automobile Co., capital stock \$50,000. Incorporators, Carl Dautel, Charles W. Demory, V. F. Bonhard, G. D. Budd and J. H. Van Deven. This company will manufacture automobiles and parts.

Pittsburg, Pa.—Keystone Automobile Co.; capital, \$50,000. Directors, O. A. Vestel, A. P. Meyer, Pittsburg, and W. H. Foster, Allegheny.

Chicago—Drabonovsky Motor Co., same changed to Chicago Machine & Motor Works.

## NEW CLEVELAND COMPANY

Cleveland, O., April 12—Local capitalists have incorporated the American Automobile Co. at Columbus with a capital stock of \$50,000. The headquarters of the new industry will be located in Cleveland. Those named in the incorporation papers are Carl Dautel, Charles W. Demory, V. F. Bonhard, G. D. Budd and J. H. Van Deven.

Carl Dautel, attorney, who secured the incorporation papers, said yesterday that the plans of the company could not at present be made public. The purpose of the company, as stated at Columbus, is to manufacture and deal in automobile parts.

It is understood that one of the gentlemen mentioned has been experimenting with an air-cooled motor and it is probable that the company will build a car of this type.

## EXPORT TRADE GROWING

Automobiles to the value of \$127,247 were shipped abroad during February, as against a value of \$63,224 for the same month of last year. During the 8 months' period ending with February last the exports were valued at \$1,141,371.



# A. A. A. MOTOR BOAT RACE RULES

AS MOTORS AGE predicted, the fight has come—it is now between the American Power Boat Association and the American Automobile Association, all over the control of the racing of fast motor boats. When the former body attempted to assume jurisdiction over the American end of the Harmsworth cup race, it hit off just a little of the other fellow's apple, with the result that a pretty fight may ensue, with all in favor of the aggressor.

When the A. A. A. has finally completed its merger with the A. M. L. the present association of clubs will be augmented by several thousand individual motorists, all of whom are more or less interested in motor boats and motor boat racing.

The A. A. A. has jumped into the field with the simple announcement that it has assumed control of racing and by the publication of the following set of rules for the conduct of races:

The following principles have been taken as a guide in framing the following rules:

1. The American Automobile Association is the sole authority in America for the regulation and control of strictly high-speed motor boat racing boats.

2. The spirit and intent of these rules is that a race is run—sailed—and won by a combination of the motor boat, its pilot and one passenger, who may act as an engineer, and that this combination must continue till the finish without modification.

Nothing in this publication shall be construed to deny an owner from carrying more than the two passengers required—viz., engineer and pilot.

SANCTIONS—Clubs and associations affiliated with the American Automobile Association may, upon filing application with the racing board, receive sanctions for regatta under these rules, without fee; clubs associated with individuals not so affiliated may upon application to the racing board receive sanctions, provided a fee of \$10 accompanies such application.

Must give name of club or association, location of organization, nature of organization, date of dates of proposed regatta, name of regatta, vessel, number and value of prizes, names of regatta officials, length of course or courses and a brief description of same.

The racing board reserves the right to refuse sanctions.

ELIGIBILITY—Motor boats, to be eligible for competition under these rules, must be registered by the racing board. With the registration there shall be filed full data as required by the official measurer and the official engineer.

REGISTRATION—Motor boats shall, upon registration, be assigned a serial number, and the owner shall receive a certificate of the official engineer.

REGISTRATION FEE—Before the certificate of registration shall be delivered to the owner there must be paid to the racing board a fee of \$25 for each boat measured and classified as to horsepower.

MEASUREMENT—Water line shall be the distance in a straight line between the points farthest forward and farthest aft, where the hull, exclusive of the rudder stock, is intersected by the surface of the water, when the boat is afloat in racing trim, in smooth water, with two persons aboard stationed amidships, while the measurements are being taken.

If any part of the stem, stern post or other part of the boat—except the rudder—below the water line projects beyond the length thus measured, such projection shall be added to the measured length; and a form resulting from the cutting away of the fair line of the stem, stern post or the ridge of the counter, for the apparent purpose of shortening the load water line, shall be measured between fair lines. If the stern has a flattened underside, the load water line shall be measured to the extreme aft end of the fair lines of the under body. When a boat is officially measured her fuel tanks may be empty. Boats must be measured at least once during a calendar year, and remeasured so often as may be deemed necessary, owing to changes or alterations to hull or motor.



HORSEPOWER—The rated horsepower of the engine shall be based on the total area of cylinder bore for all the cylinders, or the sum obtained by adding together the separate areas for each cylinder, each area being the product obtained by multiplying 7.854 by the square of the piston diameter. Unless the cylinders are known to be of different diameters, one cylinder shall be selected at random, and its bore shall be assumed to be that of all the others, the piston speed shall be assumed to be the same for all motors.

The owner shall provide every necessary facility to the measurer for obtaining the piston diameter, and to that in which the piston diameter or diameters have not been ascertained to the measurer's satisfaction shall receive a certificate of classification or be allowed to take part in a race sanctioned by this association.

For the purpose of these rules the horsepower of the motor, if of the four-cylinder type, shall be calculated on the basis of an assumed piston speed of 1,000 feet per minute and a net mean effective pressure, after deducting internal friction losses, of 66 pounds per square inch. It shall therefore be considered to be equal to one-half of the total area of the cylinder bore, as above, measured in square inches. The horsepower of a two-cylinder engine shall be calculated on the basis of a piston speed of 1,000 feet per minute and a net mean effective pressure of 44 pounds. It shall, therefore, be considered to be equal to two-thirds of the total area of the cylinder bore in square inches. In measuring the cylinder area, an allowance of 1 per cent may be made for error in bores.

CLASSIFICATION—All boats shall be divided into the following classes, according to their load water line length:

Class A—All boats not over 26 feet on load water line.

Class B—All boats over 26 feet and not over 32 feet.

Class C—All boats over 32 feet and not over 40 feet.

Class D—All boats over 40 feet and not over 50 feet.

Class E—All boats over 50 feet and not over 65 feet.

The maximum nominal horsepower, under rule 8, which boats of the several classes may carry shall be as follows:

Class A—20 horsepower.

Class B—25 horsepower.

Class C—30 horsepower.

Class D—40 horsepower.

Class E—400 horsepower.

In addition to the above regular classes there shall be a special class for boats whose built measure not more than 40 feet in length over all, with no limits on displacement, beam or horsepower, to be known as the American Automobile Association special class:

Class.	Length.	Minimum	Maximum
		W. L. Beam.	H. P.
A.	All boats not over 26 ft.		
	L. W. L.	3 ft. 9 in.	30
B.	All boats over 26 feet and not over 32 ft. L. W. L.	4 ft. 2 in.	50
C.	All boats over 32 feet and not over 40 ft. L. W. L.	5 ft. 6 in.	90
D.	All boats over 40 feet and not over 50 ft. L. W. L.	5 ft. 6 in.	150
E.	All boats over 50 feet and not over 65 ft. L. W. L.	6 ft. 9 in.	400

Special AAA—All boats not over 40 feet over all length, no restriction or limitation.

REGA—The total number of persons aboard any boat competing in a race shall not be less than two.

EQUIPMENT—Every boat shall be fitted with reversing gear capable of propelling her astern at a speed not less than 4 knots per hour.

At least one serviceable anchor weighing 15 pound per foot of load water line and 10 fathoms of manila cable shall be carried on each boat; and each boat shall have on board as many serviceable cork life buoys as the total number of persons aboard.

Each boat shall carry one pair of our life buoys and one. No boat shall be allowed to compete unless equipped with the necessary lights required by law, and a fog signal.

REGATTA OFFICIALS—There shall be one referee, three judges and three timers who shall act in their respective capacities at the start and finish. There shall be one umpire for each start, buoy or mark turned, who shall report all fouls; turns or interferences. All officials to be named by the promoting organization approved by the racing board.

REGATTA COMMITTEE—The regatta committee shall be charged with the duty of all preliminary arrangements; with the expedition of the events scheduled; and with such others as may be required of them by the referee. This committee shall provide transportation for all officials and must have a dispatch boat at the disposal of the referee.

WALK-APART—KILL-OVER—In case but one boat reports to start in an event, the referee may announce the minimum time in which the course may be covered.

APPEAL, FROM REFeree'S DECISION—The owner or skipper, in case of dispute or accident, is liable by the decision of the referee, or as a final resort to appeal to the racing board, and waits the right, in any case, to appeal to the civil courts.

FALSE ENTRY—If an owner races or allows a boat to race which no longer conforms to the conditions of registration, or under a false certificate of declaration, he shall be disqualified, with his boat be remeasured as provided in rule 6.

POSTPONEMENT—In case the sea or weather should prove dangerous, the regatta committee, the referee concurring, may postpone a race or regatta.

After a race or regatta has started the same may be postponed, as provided in rule 17.

In cases of postponed races only those boats which have started may start when the race is again taken up.

ANCHORING—Anchor may be cast in a race, but the boat be started before the anchor is cast, the race is resumed. Boats shall not lay to along side of another boat, buoy, pier or mark. Any means of holding the boat to the ground, other than by anchor, except of cases of possible accident to life, shall disqualify.

EXHAUSTING AND DUMPING—No person shall, during a race, embark or disembark from a competing boat, except in case of accident.

GROUNDING—Grounded boats must be floated only by the efforts of the crew. If they are floated they may continue in the race.

BACK-START—Each boat must carry at the bow a small jack-staff, at least 5 feet high from deck to top, and carry when competing:

a. A red flag at the trunk at least 12 inches on the hoist and 18 inches on the fly with its serial number numeral in white. Figures must be at least 1 inch high and 1/2 inch broad, and must be visible on both bands; and,

b. A suitable flag of like dimensions to be designated by the regatta committee. The color to indicate the class as provided in rule 9.

STARTS—A warning flag, indicating the class to be called, shall be hoisted on the committee boat 15 minutes before the starting gun. As for the warning the hoisting of this flag shall be accompanied by the firing of two guns from the committee boat. After a lapse of 13 minutes a second or preparatory gun shall be fired. After a lapse of 2 minutes the starting gun shall be fired from the times shall be taken. The firing of the starting gun shall be accompanied by the lowering of the flag of the class just started. After a lapse of 5 minutes the preparatory gun for the second class shall begin, and so on. No boat shall cross the starting line before the lowering of the class time flag.

If a boat shall have crossed prior to such instant, it must return and again cross. Boats in returning must return bow first, keeping clear of competing boats. Boats in returning to recross the line shall not interfere with other boats nor shall they be liable to any penalty or disqualification for competing in that event. Boats may maneuver at will prior to the final gun. Boats which do not start within 5 minutes after the starting gun shall be disqualified from starting.

CHALLENGES—Challenges for competition under these rules must be made through the regatta

board, accompanied by a forfeit fee of \$100. In case the challenger fails to appear at the appointed times and place this fee shall be divided into equal parts, one-half going to the challenged party and the other half to the American Automobile Association, to compensate its official measurer and engineer for measurements made.

All special conditions must be approved by the racing board before the start. Challenges contemplate boat for boat, without handicap or allowance.

**TRIALS**—Record and time-distance trials, to be authenticated must be: a, sanctioned; b, previously announced; c, over a course accurately measured; d, timed by approved timers.

No stated fee shall be exacted for such trials, but the owner must assume the expense and in case transportation for proper officials to and from the course.

**NAVIGATION RULES**—The following navigation rules must be followed under penalty of disqualification: In case two boats approach one another, so as to involve risk of collision, one of them shall keep off as follows:

A—When meeting end-on the course of each shall be altered to starboard.

B—When crossing courses, the one which has the other on her starboard shall keep off.

C—In any condition provided for by these rules, one boat must keep off, the other holding her course and speed.

D—A boat which is, by these rules, warned off from another, shall, if the circumstances of the case admit, avoid crossing ahead of the other.

E—Boats which are directed by these rules to keep off shall on approach, if necessary, slacken her speed, stop, and, if necessary, reverse.

F—Overtaking boats shall, in all cases, keep off from the overtaken boat.

G—Obedience to these rules contemplates due regard of all dangers of navigation and collision, and of any special conditions which may make necessary any deviation from these rules in order

that danger may be averted. In cases of boats under way, when approaching each other so that their courses shall be indicated by the following signals on either whistle or siren, viz.:

One short blast shall mean "My course is to starboard." Two short blasts shall mean "My course is to port." Three short blasts shall mean "I am reversing at speed." Five or more short blasts means general warning or to attract attention.

As soon as an overlap shall exist the overtaking boat must keep well off the boat which is being overtaken.

Boats in overtaking or passing, must allow at least 20 feet of clear water between them, and the overtaken boat shall not alter her course so as to compel the overtaking boat to pass within this 20-foot limit.

Should, however, an overlap exist between two boats at a time when both of them are about to pass a mark, stake or buoy on the required side, then the outside boat must give the inside boat sufficient room to pass clear of the mark, stake or buoy.

When a boat shall have altered her course for the purpose of rounding a mark, stake or buoy the overtaking boat shall not, under pain of disqualification, establish an overlap, so as to force a passage between the overtaken boat and the mark, stake or buoy. An overlap shall be considered to have been established when an overtaking boat has no longer a free choice of which side she shall pass. In case one of two boats is obliged to keep clear, the other boat shall not alter her course so as to involve a risk of fouling.

### BIG FRENCH RACE ARRANGED

The Commission du Yachting Automobile of France has decided that the race for motor boats of 1904 will take place on Monday, August 8, about 10 o'clock in the morning, start-

ing from either Culnis or Boulogne, and finishing at Dover. The entries for this race will be closed on the evening of June 30, and the entry fee will be 100 francs for boats up to 20 feet 6 inches and 200 francs for boats of greater length.

### ABSOLUTE GUARANTEE

Smith & Mabley, of New York, makers of the Vingt-et-Un, have taken hold of the question of rated and actual boat speeds in a vigorous and commendable manner, by drawing a contract with the purchaser of a boat whereby the latter is released from accepting the boat ordered and is returned his deposit, if it does not make the minimum guaranteed speed in an actual trial on a measured course.

### MOTOR BOAT NOTES

Raymond P. Hongland, of Boston, is reported to have offered \$12,000 for a boat of 150 horsepower which is to be guaranteed the fastest motor boat afloat. The order fell to Hollander & Tangeman, who will fit the craft with two 75 horsepower Fiat motors.

A challenge has been issued by H. H. Buffam, of Boston, to Smith & Mabley and Hollander & Tangeman for \$1,000 a side or to the winner of the match race in June for \$2,000 a side, the entire amount to be expended for a trophy of the challenge sort, or to go to the American Automobile Association to defray a part of the expense of the club run.

## HIGH VERSUS LOW COMPRESSION

Reading, Pa.—Editor *MOTOR AGE*—"It is better not to know so much than to know so much that ain't so."—Josh Billings.

The subject of engine compression is one on which much misinformation exists. Some people seem to imagine that compression and power are proportionate to each other and that an engine having high compression must necessarily have high power and that if by any means they can increase the compression they have also increased the power. There is so little truth in this belief that some correction seems advisable.

In the first place the difference between perfect compression and high compression should be known and understood. An engine may have a low compression but a perfect one, by which is meant that there are no leaks about the compression chamber. It is readily seen that each leak means loss of gases, both before and after ignition, and this loss of gas, of course, decreases the power. The average man in turning over his motor determines by the difficulty with which it passes compression whether the compression is good or bad. He also knows that a high compression motor turns over with more difficulty than one with low compression, and since it is a well known fact that a leaky motor cannot give good power he assumes that the high compression motor is the more powerful of the two and from this confounding of two separate things the error arises.

There is no ground for claiming that a high compression gives less power, and this claim is not made here, but simply that the relation between compression and power supposed to exist by most people does not exist except in possibly an infinitesimal degree.

The fact of the matter is that a given motor will draw in a given quantity of explosive mix-

ture, regardless of whether the compression is high or low. This given quantity of mixture contains a certain heat energy, and whether this motor converts a high proportion of this energy into power probably depends less on the compression than on any other one thing. A weak spark, a leaky valve, a faulty piston ring, improper timing, unsuitable springs, excessive cooling and many other factors will vary the result more widely than the mere difference between a high and low compression. And in addition to the factors which vary a given charge, other factors exist which influence the size of the charge and thus influence the power.

A high compression is secured by the use of a small combustion space, into which small space the new charge must be compressed, and since this new charge is diluted very little by the gases of the former charge, the explosion is correspondingly more violent and the resultant pressure, consisting as it does, of the high compression, multiplied by the given heat energy liberated, is exceedingly high at the beginning of the working stroke. This high pressure and high temperature result in a rapid loss of heat through the cylinder walls and of gas through any leaks, as well as a rapid fall as the piston moves outward. The compression space or storage reservoir being small, is unable to follow the piston with a large volume of gas, with the result that, when the exhaust valve opens, the pressure is found quite low.

With a low compression, having a large compression space, more burned gases remain, thus diluting the new charge and both absorbing the heat of combustion and cushioning the pressure as well as keeping down the losses to the cooling walls and through leaky joints. As the piston moves outward this large body of gas does not lose pressure quickly, but maintains a more

nearly constant pressure, thus resembling a steam engine, and exhausts with a deeper, louder sound.

The high compression result is unquestionably best where speed is desired, but for slow, hard pulls such as in hill climbing, bad roads and slow speeds on the high gear, the low compression gives best results. It produces less vibration, requires less dead weight of fly wheel, is not affected by leaks and inattention so readily, and nearly approximates steam engine results.

It is well known in mechanics that speed and power are interchangeable and that a given amount of energy can be expressed either in high speed with little power or high power with little speed and there is no doubt that this is true in the cylinder of a gasoline motor to a very considerable degree.

The final and best proof of the value of high or low compression is undoubtedly found in efficiency tests of both types of motors. The common gas engine employs compressions running from 50 to 75 pounds and has shown efficiencies as high as 25 per cent. The Diesel engine, working on a different principle and employing compressions up to 500 pounds per inch or higher, claims an efficiency of 35 per cent. Assuming other things to be equal, this is adding 1-20 to the power of the common gas engine for each 65 pounds increase in compression, a gain so small that it is more than likely lost by inattention to little conditions like leaky valves, as before stated. It may be assumed with reasonable safety that if the ordinary gas engine, which is employed for stationary work because it is economical, is not built with a high compression, the automobile motor used with less care and less regard to economy may safely be considered best with low compression.—CHAR. E. DRYDEN.

## FROM THE FOUR WINDS



PHOTO TAKEN AT LINCOLN, ILL.

RESULT OF DRIVING ON "IMPROVED" ILLINOIS ROADS

### THE COUNT PROTESTS

Paris, France, le 30 Mars—M. le Redacteur —There is a Madame du Gast in Paris which has stirred up the blood of the French automobilist clan to such an extent that there two strong following: the one being called the pro-Gasts and the other the anti-Gasts.

At once the decision of the sport's committee of the Automobile Club de France, restricting women to take part in the elimination trials, was commented in a moderate way, and generally people thought the right way had been taken. But since, Madame du Gast has written several letters to the members of the committee, which have been published in the trade and daily papers and have brought forth a sudden strong wave of sympathy in her favor. As a matter of fact there was really no other woman in France against whom the decision could have been directed, inasmuch as Madame Luckert is a tourist, and while having followed some of the big races, never took part as a lady racer, like Madame du Gast.

Several prominent firms having been asked to express an opinion concerning the case, stated that while they do not favor women drivers, and particularly in such an important race, they cannot help but make an exception in this case, as Madame du Gast has given every evidence of being a most extraordinary good and careful driver, who never had any accident, and who, in many instances, showed a great deal more coolness, better judgment and nerve than many male drivers.

The first woman driver of France has made a final appeal to the sports committee to reconsider its decision and allow her to take part in the race. Whatever will be the committee's reply, it is sure that Madame will have on her side some of the most influential members of the French trade and sport.

I, like many of my compatriots, must say I favor the machine.—COUNT CHASSIS DE TIAR-AUGE.

### FREDERICKSON'S FIX

H. E. Frederickson, an automobile dealer of Omaha, Neb., visited N. P. Updike at his office a few days ago and found him making arrangements to leave town. As Mr. Updike was in a hurry he asked Frederickson to take his automobile to the store. The automobile was standing in the street in front of the building. When Frederickson went down he found a crowd around the machine and a policeman guarding it.

"Whose machine is this?" asked the policeman.

"It belongs to Mr. Updike," said Frederickson.

son, trying to make out what the trouble was about.

"Then what are you going to do with it?" was the next question.

Frederickson tried to explain, but the doubting eye of the policeman and the laughter of the crowd made him excited. Finally the policeman said that according to the story the machine was in Frederickson's charge, and therefore Frederickson was under arrest for leaving an automobile in the middle of the street. The officer gave him the option of riding with him in the patrol wagon or taking himself and the officer to jail in the automobile. The automobile was chosen and shortly after Frederickson was released by signing his own bond and promising to appear the next morning.

An ordinance regulating the speed of automobiles in Quincy, Ill., was passed a few days ago. It specifies that the speed of motor cars on the streets of the city shall not exceed 8 miles per hour in the district bounded by the river on the west, Twelfth street on the east, Spring street on the north and Ohio street on the south. In other parts of the city the speed may reach 10 miles. All cars must be provided with a gong or horn, brakes and lamps. The cars must be numbered on the rear of the machine and the figures must be at least 3 inches in height. Every owner of an automobile must register his name and number with the city clerk. The first offense in violating the ordinance will result in a fine of from \$10 to \$100; subsequent violation will be punishable with a fine ranging from \$25 to \$100.

The bad condition of the roads in and near Schenectady, N. Y., was the principal drawback in the past for the increase in popularity of motoring. The present season seems to indicate that many cars will be sold, judging from local information. The people are buying cars, although the roads are still very bad and a movement is on foot to urge the city authorities to have the principal streets and roads repaired and made ridable. Ben Bartis, located in Jay street, is the local agent for the Steves-Durys, the Orient buckboard and the Pope-Toledo cars; Stewart Vrooman, 412 Union street, handles the Rambler line; Philip Ryan, Lafayette street, handles the Marsh, Merkel and Indian motor cycles.

Weaver & Co., who are the agents for the Oldsmobile and Studebaker cars in Cedar Rapids, Ia., have added a salesroom and repair shop to their building.

The first cycle show in Agricultural hall, London, was in 1896, when bicycles and accessories formed the exhibit exclusively. At the following year's show several motor cars were exhibited, and the number increased the year after. In 1899 there were seventy automobile exhibitors, and in 1900 the number was ninety-four. There were 154 at the show the following year, and 238 in 1902. There was but a slight increase of exhibiting firms in 1903, the total being 247, but during the following 12 months a great number of new concerns seemed to have come into existence, because there were eighty-three more exhibitors at this year's show, there being 330 altogether.

One of the laws made by the 1904 legislature of New Jersey provides that all automobile license numbers of other states be removed from cars when they enter New Jersey territory, and that only the license number of that state be displayed. The law is due to the fact that out-of-state automobile owners been frequently stopped by constables to ascertain if the several license numbers carried included the genuine Jersey article.

Automobile owners of Knoxville, Tenn., met last Wednesday in a preliminary meeting to organize an automobile club. Cowan Rogers, acted as chairman and Dr. J. H. Kincaid secretary. A committee consisting of R. L. Rodgers, Henry Howard and Dr. Cochrane was appointed to draw up a constitution and by-laws, and when this work is done a meeting will be called to effect permanent organization.

Franklin P. Shumway, of Boston, who for 15 years has conducted an advertising agency, last week incorporated his business under the name of the Franklin P. Shumway Co., with a paid-in capital of \$30,000. Mr. Shumway has taken hold of the advertising of several prominent automobile concerns and his friends in this trade will doubtless be pleased to know of this advance.

The Swinehart Clincher Tire & Rubber Co., of Akron, O., has opened an eastern branch at 1754 Broadway, N. Y., under the management of W. C. Parsons. The Swinehart company has met with encouraging results in the introduction of its clincher-fastened solid tires and feels confident that this season will be a profitable one.

The chief of police of St. Louis, Mo., has issued special instructions to the police department to enforce the observance of the automobile speed ordinance, which provides that 8 miles per hour is the speed limit in the thoroughfares of the city and 6 miles in the public parks.

The catalogue of the Phelps Motor Vehicle Co., of Stoneham, Mass., describes the three-cylinder Phelps car, which has had such excellent success in hill climbing trials and contests. It is a plain, comprehensive booklet, full of facts than of rhetorical and illustrative fables.

At the first allotment of space for the 1905 Crystal Palace Automobile show, London, fifty-two early birds were assigned stands.

R. S. Crawford, former manager of the Crawford Bicycle, has started an automobile factory in Hagerstown, Md.

A number of automobilists of Hamilton, O., are planning a trip to the world's fair.

◆◆◆

The New Jersey Automobile Club is planning a race meet to be held May 30 on the Clifton track.

◆◆◆

Motorists of Youngstown, O., are planning to hold automobile races at the fair grounds in the near future.

◆◆◆

The Motor Union of England had 5,136 members up to March 22, when the annual meeting of the organization was held in London.

◆◆◆

It is reported that the Southern Electric Co., of Nashville, Tenn., which now uses nearly thirty horses will soon purchase automobiles and do away with all the animals.

◆◆◆

The Duntley washable storage battery cell, which may be quickly cleaned by turning the hose on it, is the subject of an illustrated circular issued by the Chicago Storage Battery Co., 1241 State street, Chicago.

◆◆◆

The baseball season in Binghamton, N. Y., will be inaugurated with a parade, in which automobiles will play the most conspicuous part. About fifty will be in line and dealers in the city believe the event will be beneficial.

◆◆◆

Newmastic filling, a plastic substance for filling pneumatic tires "to make old tires new and new tires puncture proof," in other words, to make an elastic cushion tire of a pneumatic, is described in a folder issued by Harry R. Geer, 1017 Pine street, St. Louis, Mo.

◆◆◆

An automobile repair shop has been added to the establishment of the Headson Tool Works of La Fayette, Ind. The department will be in charge of Gilbert Christian, who conducted a repair shop in the town for a number of years.

◆◆◆

A tour through Michigan, Indiana, Ohio, Illinois and Wisconsin is the undertaking which Dr. L. L. Conkey of Grand Rapids, Mich., has mapped out. The physician will be accompanied by his wife and two children and expects the trip to extend over several months of pleasant driving.

◆◆◆

One of the latest conversions into the motorizing field is that of John Fisher, the Chicago bicycle rider who for several years kept himself in a prominent position in the list of professional riders. Fisher is reported to have joined the staff of Orlando Weber, of Milwaukee, and will probably have charge of the latter's 90-horsepower racing car.

◆◆◆

Orlando F. Weber, the Milwaukee dealer, will be the possessor of a 90-horsepower Pope-Toledo racing machine about June 1. The car will be built with the intention of being able to cover the mile in 35 seconds. Weber will go to Florida to test the car and then take part in all the principal track races during the season.

◆◆◆

There are about twenty-five owners of automobiles in Kalamazoo, Mich., and local dealers claim to have received orders for about thirty more cars to be delivered as soon as they are received from the manufacturers. Several owners of cars met recently and decided to call a meeting of all owners of the town and form an automobile club.

Fire caused a loss of several thousand dollars last week to the automobile and bicycle store of L. F. Schoelkopf & Co., Madison, Wis.

◆◆◆

The Automobile Club of America concluded its winter series of weekly club nights on Tuesday with a smoker gotten up by Emerson Brooks of the house committee.

◆◆◆

Duncan Dorris and J. C. Symmes, both of Nashville, Tenn., will soon make an automobile trip to St. Louis, Mo., in order to map out a route to be taken by a party of Nashville motorists who intend to go to the automobile encampment at the world's fair.

◆◆◆

According to the Republic of St. Louis, Mo., automobiles are destined to be the most popular vehicles on the world's fair grounds, judging from the large amount of business the World's Fair Transportation Co. is doing. On April 3, it is claimed that the thirty big buses of the company carried 5,000 people around the grounds. The pass gate recorded an attendance of 10,159 that day.

◆◆◆

According to a Maine newspaper, an automobile factory will soon be located in Sanford. In commenting this feature, the News of Bangor, says that there is not better field for this sort of business than in Maine, where the quality of skilled labor to be had and the infrequency with which that labor gets involved



SECTION ONE

PYCN ON ORMOND BEACH

with capital over disputes about wages or other matters combine to make ideal conditions.

◆◆◆

At a recent meeting of the city council of Macon, Ga., a new ordinance relative to the numbering and registering of motor cars was submitted to the councilmen. It stated that all owners of cars must register with the city clerk before April 15 and that the vehicle must be numbered. Some of the members wanted the number to be 3 or 4 inches in height, while others insisted upon 5 inches as the minimum height. The proposition was finally referred to the ordinance committee.

◆◆◆

At the annual election of officers of the Toledo Automobile Club, Toledo, O., a proposition was discussed dealing with the renting of the Empire hotel to transform it into a country club. The hotel is located near Stony Ridge, 12 miles from the state road, will be repainted, and fixed up shortly. The club decided to wait until the next meeting before taking final steps in the matter, because many of its members have expressed the wish to visit the prospective club house before making a decision. The following officers were nominated for the current year: Edward J. Marshall, president; Noah Whitney, vice president; Dr. C. P. Wagner, secretary and treasurer. In the election for directors Peter Goudron, Frank Hake, W. D. McNall and C. A. Lacey were elected, besides

the officers mentioned above. Mayor Sam Jones was made an honorary member.

◆◆◆

The Washington government has been advised that under the new tariff law of Ecuador, which went into effect on January 1, 1904, automobiles are admitted free of duty. Gasoline is also duty free.

◆◆◆

Three new projects for automobile tracks near Paris have been inaugurated within the last few weeks. If these tracks, as well as contemplated nearly every month last year, were all completed they would cover a tract of land about 25 miles square.

◆◆◆

The Automobile Association of Berlin and the Automobile Club of Leipzig have arranged an endurance run for motor cars and motor cycles to take place May 8 from Berlin to Leipzig and return, approximately 225 miles. Small cars, which include all vehicles under 10 horsepower, will cover the distance to Leipzig, but must do so within 7 hours, while all other vehicles have 11½ hours to cover the entire course.

◆◆◆

At the Nottus fair in France, which will remain open from May 25 until September 1, a special building has been added for the automobile and motor boat display. The exhibition committee did not intend at first to include a motor vehicle and boat section, but so many applications for space were received, thus assuring a success for this particular section that it was decided at the last moment to erect a special building for these exhibits.

◆◆◆

The McHenry County Automobile Club, of Illinois, was formed at Woodstock, Ill., last week. The following officers were nominated: A. J. Owsen, Woodstock, president; A. S. Towne, Harvard, secretary; E. C. Jewett, Woodstock, treasurer; F. R. Jackman, Woodstock, attorney. Eight vice presidents were elected, E. B. Manley, Harvard; J. H. Patterson, Marengo; J. W. Chevaing, Algonquin; B. H. Taler, Richmond; John Douglas, Hebron; H. W. Watson, Nunda; T. J. Walsh, McHenry; Elmer Waterman, Greenwood.

◆◆◆

At a meeting of the Automobile Club of Fort Wayne, Ind., held April 6, the following officers were named: President, W. M. Griffin; vice president, O. N. Gullison; secretary, A. L. Randall; treasurer, Harry Meyers. The following committees were appointed by the new president: On good roads and legislation, Dr. L. P. Drayer, Daniel B. Ninde and Hugh G. Kegans; on runs and racing, Will H. Pettier, Dr. J. E. Miller and Thomas Baxter; on house and entertainment, Dr. E. Wright Dolez, Al C. Alter and Delmer Fitch. The club has forty-nine members.

◆◆◆

There are about fifty owners of automobiles in Birmingham, Tenn. Twenty cars were sold last year and a similar quantity the previous season when the motor craze was at its height in the Tennessee town. The only exclusive motor car dealer is the White & Blake Carriage Co., which has the agency for the Oldsmobile, Cadillac and Rambler. The Orient buckboard is handled by the Birmingham Arms and Cycle Co. There is a good deal of talk about forming an automobile club in the near future and arranging for some automobile race meetings.

# AMERICAN MOTOR LEAGUE

## OFFICERS:

ISAAC B. POTTER, President,  
Potter Building, New York  
CHARLES E. DURYEA, First Vice-Pres.,  
Reading, Pa.  
W. GRANT MURRAY, Second Vice-Pres.,  
Adrian, Mich.  
R. W. MERRIHEW, Third Vice-Pres.,  
154 Nassau St., New York  
ROBERT L. STILLSON, Secretary,  
150 Nassau St., New York  
FREDERICK B. HILL, Treasurer,  
32 Blinford St., Boston.

National Headquarters:  
150 Nassau Street, New York



## CHAIRMAN OF NATIONAL COMMITTEES:

LEGISLATION—  
George H. Bidwell, New York, N. Y.  
ROAD IMPROVEMENT—  
H. E. Oude, Lansing, Mich.  
LOCAL ORGANIZATION—  
Charles F. Potter, Denver, Colo.  
TOURING—  
W. H. Baker, Buffalo, N. Y.  
TECHNICAL—  
Charles E. Duryea, Reading, Pa.  
MEMBERSHIP—  
Francis A. Faxon, New York, N. Y.  
SIGN BOARDS—  
John B. Price, Hasleton, Pa.  
RACING—  
A. G. Barchelder, New York, N. Y.  
PRES.—  
Joseph Estoclet, Philadelphia, Pa.  
HOTELS—  
Francis N. Baldwin, Newburg, N. Y.

## OFFICIAL BULLETIN

### THE A. M. L.—A. A. A. MERGER

An important question is about to be decided by the automobilists of the United States and especially by the members of the A. M. L. and the A. A. A. Two organizations have been looking to the same source for strength and support. Separate headquarters have been maintained, two sets of officers elected and the expenses of administration kept a figure at least double the amount that would be needed to conduct the affairs of a single national body. Between these two organizations the ranks of the automobilists have been gradually dividing and from month to month the problem of uniting these forces under one banner has become more and more difficult. Some rivalry has found place in the affairs of the two bodies and it may be that the strife for supremacy has not at all times been manifested in the most friendly way; but happily the controlling boards of both organizations have "carried ballast" and have always recognized the goal that might come of an effort to unite the A. M. L. and the A. A. A. into one.

For some weeks conferences have been held between committees of the two organizations and by these committees a plan was finally evolved for bringing about the much desired union. This plan has been approved by the executive boards of both the A. A. A. and the A. M. L. and will be now submitted, by mail vote, for the approval of the membership at large. The plan of merger includes the following features:

1—The name of the proposed new organization is to be American Motor Association.

2—The property, assets and affairs of both the A. M. L. and the A. A. A. are to be taken over and managed by a board consisting of ten members of the A. A. A. and a like number of A. M. L. members—twenty in all—for the balance of the official year.

3—A committee of four—two from each organization—will prepare a new constitution and by-laws and submit it for approval and adoption by the managing board.

4—The constitution and by-laws will make provision for perpetuating those features of administration which have proven helpful and valuable in the management of the separate bodies.

5—A department of organization is to be formed and placed under the management of the secretary and carried on in a manner to insure the effective growth and success of the new body in its various departments.

6—The officers of the proposed new body are as follows: President, Harlan W. Whipple, now president of the A. A. A. and a member of both organizations; first vice president, Charles E. Duryea, now holding the same office in the A. M. L.; second vice president, Hon. William H. Hotchkiss, A. A. A.; third vice president, A. P. Fleming, A. A. A.; secretary and manager, Isaac B. Potter, now president of the A. M. L.; treasurer, G. A. Farrington, A. A. A.

7—The racing board of the A. A. A. shall be in no way affected by the merger but shall represent the new organization, the racing rules of the A. A. A. shall continue in force as the rules of the united body.

8—In all cases where the A. M. L. and the A. A. A. have committees bearing the same or similar titles such committees shall unite and serve as one committee during the balance of the official year.

9—A concise statement setting forth the plan and purpose of this proposed union is to be sent by mail to each member of each organization and an opportunity given for all to express their approval or disapproval of the same. It is obviously necessary that on this vote the "polls should close" at some time previously fixed; and such time has been set at a date 15 days after the mailing of the printed slips. After the manner of other wedding ceremonies persons having objections to offer should do so promptly or forever after "hold their peace."

### WHAT THE UNION MEANS

It means that the users of motor cars in the United States are getting together and that the new association will command the united support of all who believe that organization is necessary. It means that a disintegration of forces among automobilists is no longer to be heard of in America, and that the only real means of attaining the things that automobilists are entitled to is now at hand. It means also that with this great union of interests good roads will be at hand.

### ALL SHOULD VOTE

The postal card ballots will be sent out next week. The league asks every member to express himself in some way upon this question. There should be a positive and decisive vote, —one that will show to our friends in the A. A. A. that league members are wide awake to every question that affects the general good of motoring.

### CANDIDATES AND ROADS

Sidney S. Gorham, chairman of the good roads committee of the Chicago Automobile Club, of Chicago, recently sent a letter to each of the candidates for governor of Illinois, asking for his views on the good roads question. The replies received to date are printed below, but Colonel Lowden and Mr. Deeney evidently think light of the subject, as they have made no reply so far.

L. Y. SHERMAN—Good roads in the country require proper material at a price within the voluntary exercise of the taxing power. The fear of excessive taxation prevents legislation. Nothing would benefit the state more than the improvement of its highways.

RICHARD YATES—I do not claim to be thoroughly informed in regard to the good roads movement, and do not understand that it has as yet taken definite form and purpose in Illinois. By authority of the last general assembly of the state I have appointed a good roads commission whose duty it is to investigate the various problems of road building in Illinois, such as the best and most economical native materials, the best system of road drainage, the best and most practicable methods by which the burden of costs may be equitably distributed among all the people, such as federal, state and county aid, convict labor, etc. The results of the investigation and studies of the commission shall be embodied in a report to the next general assembly to be accompanied by the form of a bill for an act to amend the present road laws of the state, so as to conform to the present advanced thought and requirements on the subject of road building.

The commission is now actively engaged in its work, but has not yet reached a point where its members feel justified in arriving at final conclusions, nor in making definite recommendations.

Personally, I would rejoice in seeing an improved condition of Illinois wagon roads, and sincerely hope that a plan may be devised by which this may be brought about without imposing an unjust burden upon the communities through which improved highways may be constructed. I understand that there is a strong sentiment in favor of the work being undertaken, and the expense being borne by county, state and federal aid. This appears to me to be just and reasonable, and I shall esteem it a pleasure to aid in bringing about a practicable and fair solution of the good roads problem.



# MOTOR AGE

VOL. V. NO. 16

APRIL 21, 1904

\$2.00 Per Year

## PROSPECTING VANDERBILT CUP RACE COURSE



THE START AND FINISH

**N**EW YORK, April 18.—The proposed course of the race for the W. K. Vanderbilt, Jr., cup has been thoroughly explored by Joseph Tracy in the Peerless 1903 cup racer on several occasions, and last week it was photographed at all turns and at every control. The pictures show the many desirable features of the route and nothing against it. In fact, the route from Queens, along the Jericho road to the Hicksville road, thence along the Merrick road to Freeport, to Hempstead and the Hempstead road to Queens, was found ideal for racing. The surfacing is of macadam on all of these roads and is in fine shape.

Sitting on the floor of the car the photographer traveled the entire 42 miles without the slightest trouble from juts or pits, carrying a camera in one hand and a plate box in the other. "Like riding on Grand old leach" was the verdict.

The Jericho road was as fast as any boulevard and practically as smooth as asphalt for over 12 miles. There were no ruts and no potholes, and the car sailed along in a manner that was pleasing and delightful. The turn at the Hicksville road junction was found to be a rising turn at a right angle, requiring the slowing of the machine for a successful turn.

Down the Hicksville pike the car sailed, passing through Hicksville, the entire road being equivalent in every way to the Jericho road. Turning into the Merrick road was

easy, as the car swung wide and without side slope. Down the famous Merrick road the traveling was again good and the Grand Avenue road from Freeport to Hempstead, while narrow, is excellent. The Hempstead road to Queens was likewise found in good shape and fast. The starting and finishing point is a V at Queens, and the cars must go round on a wide turn.

Controls will be established in Hicksville, which is about 22 miles from the start; at Freeport, about 10 miles from the start; at Hempstead, 5 miles further on, and at Queens, 7 miles further.

The trip of exploration was taken in a leisurely manner, stops being made at the East Wellston hotel, half way down the Jericho road, at Powell's hotel, at the junction of the Jericho road and the Hicksville road; at Peter Killman's hotel, at the entrance of the Merrick road, where it joins the Hicksville

pike; at Freeport and Hempstead and at Queens. The hotel proprietors and the residents were found to be unalterably in favor of the race and such residents as were seen were likewise favorable to the holding of the contest on Long Island, especially as the local people will get their "fix" out of the race as guards at the cross roads and at all points where the people gather.

Mr. Tracy has been over the course a number of times, taking several prominent people with him, and on each trip he has done all possible to spread the gospel along the route among the people he met. As a result of the good work the people bear a kindlier interest toward automobilists in general and there was noticeable a kindlier feeling on the part of farmers along the route. The genial nods given were cheering in every way and as not one word was expressed adversely to the race by a score or more people interviewed directly, the impression naturally grew that America's first road course of importance had been found and won for the good cause.

Chairman Hardington when seen today said,

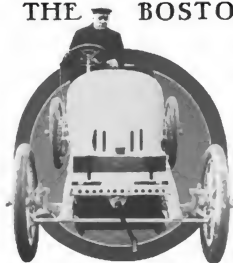
"While it is not certain, I feel reasonably sure that the officials of Queens and Nassau counties and the local officials will be favorable. It will be some time before the definite announcement may be made and the chairman requests the drivers of cars to refrain from fast driving when going over the course, as such proceedings would inevitably result in arousing prejudice against motorists."



HALF WAY BETWEEN QUEENS AND JERICHO



# THE BOSTON HILL CLIMB



MOTOR 24.

H. B. HILLS, JR., ON THE GEORGE RICHARD-BRAZIER CAR

**B**OSTON, April 20.—Two French cars, a 60-horsepower Mercedes and a 40-horsepower Georges Richard-Brazier, carrying off first honors yesterday in the annual Commonwealth avenue hill climbing contest conducted by the Massachusetts Automobile Club was a feature of the celebration of Patriots' day, a Massachusetts holiday in commemoration of the revolutionary battle of Lexington.

The contest yesterday was a much greater affair than that of last year both in number of participants and in spirited competition. There were forty entrants and thirty starters in the aggregate, three of the twenty-seven actual participants figuring in two classes each.

The contest started promptly at 2:30 p. m. An hour before obeying instructions from Chairman William Wallace, of the club's committee, the contestants reported to Clerk of the Course Krennan and lined up to start in the order of their numbers and with the electric first, gasoline cars next and steamers last.

Commonwealth hill was never in better condition, having been put into fit condition under the personal direction of Division Superintendent of Streets Francis McCarthy. First it had been raked of all loose stone, then

swept by a street sweeper, next watered and rolled and finally yesterday morning re-rolled. It was in excellent shape for speeding and it was certain from the start that last season's marks would be lowered. The gasoline car drivers also viewed it with confidence and vowed to beat the steamers at the game in reversal of last year's results. They did.

H. B. Hills, Jr., and his light 40-horsepower Georges Richard-Brazier had been tipped as the winning combination and the tip proved correct, with the qualification of division of the honors with H. L. Bowden, of Boston, and the Mercedes which he drove in the Ormond beach speed tournament last winter. Each drove up the 1-5 mile incline in 15 2-5 seconds, 1 1-5 seconds better than the next best time of the day, that made by F. M. Marriott on a Stanley steamer, and 1 3-5 seconds better than the fastest mark scored last year, when Frank Durbin on a Stanley flew up the 15-per cent grade in 17 seconds. The best time scored by a gasoline car last year was 43 1-5 seconds, by F.



MOTOR 24.

H. L. BOWDEN AT THE WHEEL OF HIS MERCEDES

K. Randall on a Stevens-Duryea, so the Bowden-Hills tie netted a gain of 27 4-5 seconds for this class. In electric cars there was a speed gain of 21 seconds. Messrs. Harney and Marvel, with a National and a Waverley respectively, negotiating the course in 1:15 3-5 each, as against the 1903 mark of 1:36 3-5

made by W. G. Titcomb on a Waverley machine.

The fastest time scored yesterday was 15 2-5 seconds, or at the rate 1:17 to the mile on an average 15-per cent grade. The slowest time was 1:29, an average speed per mile of 7:35.

The average time of the electric cars was 1:15 3-5 and the average horsepower of these cars 2 1/2.

The average time of the gasoline cars was 36 3-5 seconds and their average horsepower 18.

The average time of the steamers was 23 4-5 seconds and their average horsepower 6 1/2.

The general average time of all cars was 37 2-5 seconds and their average horsepower 15, giving a net result of the day's sport, of automobiling up a 15-per cent grade, at the rate of 3:07 to the mile or 19 1/4 miles an hour—fast enough to go from Chicago to New York in 52 hours were the route up a corresponding grade all the way.

The day was perfect for such an event. Despite the other patriotic and sporting attractions of the day, thousands lined the course on fashionable Commonwealth avenue. The police had its honest hands full keeping the course clear and the sputter of the motors beat a sharper reveille than that which called the minute men to arms when the U. S. A. was given birth. Battle was in the air; battle for glory and the spectators were expectant and ready to be thrilled. Foreign cars carried away a big share of the glory but they were not Britishers.

Fashion was out in force, not even being deterred by the horse show.

Much disappointment was evident on account of the absence of several entrants who had been counted among the star performers. Joe Tracy was unable to drive the Peerless 1903 racer on account of the burning of the clutch leather, as at Ormond, too late for replacement in time to compete. S. B. Stevens, of Rome, N. Y., the Mercedes amateur, wired Monday night that illness of his chauffeur kept him at home. This was especially regretted on account of the close, good natured competition between Stevens and Bowden, both driving 60-horsepower Constadt-made cars.

The cars had been divided into general clas-



CONTROL AT FREEPORT



ON THE LONG ISLAND COURSE

MERRICK ROAD



ROCKY HILL ROAD



ON THE LONG ISLAND COAST



HICKSVILLE AND JERICHO ROADS

res according to motive power, electric, gasoline and steam. The gasoline cars were subdivided into classes according to weight, the new A. A. A. kilogram classification on the French basis being used. The arrangements had been carefully made and there was no hitch in the whole proceedings. The timing was excellent.

In the electric class C. H. Barney, National; and H. E. Marvel, Waverley, were the only starters, and both scored even at 1:15 3-5 there was no decision.

In class A, for gasoline cars weighing from 1435 to 2205 pounds, competition was keen until Howden rushed his Mercedes up the grade in 15:2-5, slashing 8 seconds off the inter-season Phelps record of :23 2-5, and beating his nearest competitor in the class by 9 2-5 seconds. This second man was Arthur Adams, Pope-Toledo. Charles Donahue, driving Harlan Whipple's 20-horsepower Mercedes, made third best time, :26 2-5. He would have probably made better time had his clutch not slipped. H. E. Rogers, Peerless, was fourth in :26 4-5.

H. B. Hills, Jr., with the light Georges Richard-Brazier of Gallion hill fame, was king pin in Class B for cars weighing 815 to 1435 pounds and his 15 2-5-second run up the hill was the more remarkable on account of beating all but one of all classes and tying that one. He started like a shot and never changed gears, rushing to the top on high speed. He easily made the hit of the day. Otto Nestrom with the stripped Stevens-Duryea racer of Eagle Rock hill climb fame, was second in this class, taking the hill in 18 4-5 seconds, while Kenneth A. Skinner with his little De Dion-Bouton Paris-Madrid racer was third just 7 seconds behind Nestrom.

There was disappointment in the running of the steamer trials on account of the withdrawal of one of the most promising candidates, Frank Durbin, Stanley, hero of last year's contest. He was at the line, ready to start, and just as the word was given a fusible plug blew out and as there was not sufficient time for replacement Durbin was forced to drop out. Marriott, Stanley, won in his class and also secured the steam record. L. R. Ross, Stanley,

## SUMMARY BOSTON HILL CLIMB

ELECTRIC CARS			
Driver	Car	H. P.	Time
C. H. Barney.....	National	27 1/2	1:15 3-5
H. E. Marvel.....	Waverley	3	1:15 3-5
GASOLINE CARS			
Class AA—Over 2,205 Pounds			
Arthur Adams.....	Pope-Toledo	24	29 3-5
Class A—1,435 to 2,205 Pounds			
H. L. Howden.....	Mercedes	40	15 2-5
Arthur Adams.....	Pope-Toledo	24	24 4-5
Charles Donahue.....	Mercedes	20	26 2-5
H. E. Rogers.....	Peerless	24	26 4-5
R. Hutchinson.....	Phelps	15	31
C. S. Howshaw.....	Thomas	24	31 1-5
James Baker.....	Phelps	20	31 1-5
D. Schmitt.....	Thomas	24	36 2-5
Class B—815 to 1,435 Pounds			
H. B. Hills, Jr.....	Richard-Brazier	40	15 2-5
Otto Nestrom.....	Stevens-Duryea	11	18 4-5
K. A. Skinner.....	De Dion-Bouton	16	23 1-5
J. F. Durbin.....	Stevens-Duryea	7	29 4-5
James Baker.....	Phelps	20	29 4-5
R. Hutchinson.....	Phelps	15	34 4-5
P. W. Palmer.....	Phelps	20	34 4-5
W. D. Adams.....	Peerless	8	47 3-5
R. F. Coburn.....	Peerless	8	48
Charles Wilson.....	Ford	8	52 3-5
F. B. Ware.....	Peerless	8	1:06 4-5
Class C—545 to 815 Pounds			
J. C. Eddison.....	Orient	6	33 2-5
Ray Green.....	Orient	4	1:06 1-5
Joseph Downey.....	Orient	4	1:29 4-5
STEAM CARS			
Class A			
C. R. Groat.....	Groat	12 1/2	23 3-5
Class B			
L. R. Ross.....	Stanley	6	18 3-5
John Curry.....	Walham	4 1/2	12 2-5
Class C			
P. M. Marriott, Jr.....	Stanley	6	16 3-5
K. M. Binkley.....	Locomobile	4 1/2	20

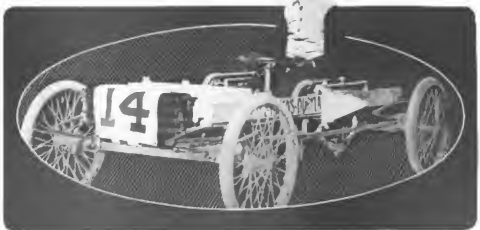
easily captured the honors in his class as did C. H. Groat, Groat, in his.

Class C for gasoline cars weighing from 515 to 815 pounds, was an Orient affair, in which J. C. Robbins scored first in :33 2-5.

The regular trials occupied so much time that there was no chance to run off the tier.

The complete summary of the trials is given in the annexed table.

The utmost satisfaction was expressed on all sides over the outcome of the contest, for while locally-made cars and cars made near enough to the Hub to seem homegrown were worsted by foreign-made machines, the owners of these latter were New Englanders and then, besides, the whole show was run so smoothly and fairly that there was no spirit of competition other than the gentlemanly rivalry of clean sportsmen. To the gasliners the worsening of the steam fellows was a great joke, for the latter had always before held sway on the hill. The public was interested in this class competition as well as in the individual wrappings for honors, and, altogether, the affair was an excellent example of how successful a purely amateur sporting event may be made by friendly competition and able management. Patriot's day was well celebrated by the Boston automobilists.



OTTO NESTROM

OTTO NESTROM ON THE STRIPPED STEVENS-DURYEA USED IN BOSTON HILL CLIMB

# MOTOR AGE

Published Every Thursday by  
THE TRADE PRESS CO.  
1303 MICHIGAN AVENUE CHICAGO  
Telephone Calumet 7011

New York Office, 114 West 18th Street.  
London Office, American Publication Ex-  
change, 25 Mount Park Rd., Hockland, N. W.

Entered as Second Class Matter  
October 3, 1905  
Post Office No. 1303  
Chicago, Ill.

Accepted for mailing  
October 3, 1905  
Post Office No. 1303  
Chicago, Ill.

Published for the  
Trade Press Co.  
October 3, 1905  
Post Office No. 1303  
Chicago, Ill.

Entered at the Chicago Post Office as Second  
Class Mail Matter

Subscription, Two Dollars per Year  
Foreign Subscriptions, Four Dollars

Any Newsdealer may obtain Motor Age through  
the Western News Co., Chicago, or any  
of its branches, on a returnable basis

## MOTOR BOAT SPEED

**I**F THE American builders of fast-going motor boats sustain their reputations made in craft construction, they must produce boats which will exceed 24 miles an hour; if some builders hold to their advertised guarantees in matters of speed, the foreign-built craft of 1904 will have been surpassed by some 11 miles to the hour.

It is up to the American makers to show that they can exceed 24 miles an hour, the present foreign record.

Last year 22 miles an hour was the speed limit abroad, made in official races; in America no official times were recorded. During the fall and winter the cleverest boat constructors and motor makers abroad sought to make a combination of boat model and power equipment that would exceed these figures, and this they just accomplished.

To beat 24 miles an hour will not be difficult; to make 35 miles an hour will be nothing short of wonderful.

Some American builders have advertised a guaranteed speed of 35 miles an hour for an automobile boat. In the absence of opportunity to make trials this is daring, indeed.

Still, it may not be impossible—few things are impossible these days—but the 35-mile man will now have to make good.

If he does it will not be convincing to foreigners, inasmuch as previous American motor boat times have been mere say-so. The 35-mile boat, to sustain American reputation, must go abroad and prove its speed in an open contest with the boats which made such remarkable showings a few days since in the Mediterranean waters off Monte Carlo.

## NEWSPAPER INCONSISTENCY

**M**ANY of the large daily newspapers are disposed to pay little or no attention to automobile news. With a more or less prejudiced conception of news value the editors of such papers relegate the brief telegraph stories of big events to little old corners of the paper and do not even deign to touch the less spectacular motor happenings. The paper may have special reporters for all other lines of news, but there is none for automobile news. No one on the staff knows the workings of the sport of automobilism, it says nothing of the pastime and the trade. It is

considered as an incidental source of news—a filler. Only its legal side—the arrest of motorists—is deemed to have real news value. To mention a firm name in a story would be journalistically criminal, for it would create advertising value. Hence the paper would not consider for a moment the fitness of giving the trade name of a record breaking car in connection with the story of its onslaught on faster time. There is no space in the paper for such advertising stuff. Space is needed to tell about the thirty dimpled darlings who constitute the creaking chorus of a cheap burlesque show where you may smoke if you like and learn why the chicken crossed the road.

American motoring news is treated as though it were nothing; meant nothing; was of interest to none. The endurance run of last fall merited about 3 inches a day in the Chicago papers, was styled a race and to the readers of those papers appeared to be some crazy affair in which No. 16 reached town first and No. 27 second.

American motoring is full of good news, which is easily obtainable. But the newspaper treats it as rot, fit to fill holes in the make-up or to bolster a Monday sheet when other news is scarce.

But let some European society or royal person discharge his chauffeur or set fire to his gasoline tank; let some obscure automobile club in the middle of Germany decide to erect a garage; let the King of England buy a new car or scorch down the public highway that he may give the horse laugh to the "bobby" who tries to arrest him—and a column story is cabled across the Atlantic and in the Sunday sheet given equal prominence with a cable concerning the political future of France or the German government's position in the matter of the Japanese-Russian war.

American motor news of real, live, permanent value is as nothing. Cabled tommyrot from Europe is important. This is the consistency or lack of it, as you will, of many a daily newspaper's conception of news value.

## DRIVERS NEEDED

**T**HERE is a scarcity of drivers of automobiles; not of racing cars or of Roi des Routes touring cars, but of commercial vehicles. This is brought about by a peculiar condition. Young men will learn to drive commercial cars, and when well broken in will find out they can get higher wages driving pleasure cars. They enter the less arduous and more lucrative field. This thinning of the ranks of the commercial car drivers cannot be prevented just now. There is not such a superabundance of car drivers of all sorts that many are forced to remain in the commercial field and the latter branch cannot afford to retain the good men by meeting the salaries in the other branch.

Business vehicles must be run to save and to make money. They are not part of a fad or a passion. They represent a simple proposition in economics. The wages of the operators of the car have much to do with the cost of the service rendered by the car. The salaries paid to pleasure car chauffeurs are prohibitive in the business field.

One manufacturer of commercial automobiles said recently that the greatest hindrance to the progress of his branch of the industry was to retain drivers at wages that could be paid. He said the operation of the cars meant the constant breaking-in of new men, only to effect a constant donation of good drivers to the pleasure class.

This is a deplorable condition. The future of the commercial automobile is even wider than that of the pleasure car. It must have the men necessary to support and encourage its growth. There may arise an over-supply of pleasure car chauffeurs, which will force some of them back into the commercial field at lower salaries or one of two conditions of development may cause a change for the better in the situation as it exists. Commercial vehicles may be made of so simple operation that they may be entrusted to cheaper drivers, who are not actually skilled operators in the present sense of the term; or commercial automobiles may be made to be so cheaply operated and maintained and so efficient in service rendered that good salaries may be paid to skilled drivers without rendering the total cost excessive. This would seem to be the more desirable way. If by the automobile one wagon driver may in a day accomplish the work of three or four horse truck drivers it is well for him to be more skilled and get more money for his work.

## FRANCE LOSING PRESTIGE

**C**HARLES JEANTAUD, an automobile manufacturer of France, contributes an interesting article in a recent issue of L'Automobile concerning the automobile trade in France. He lays great stress on the fact that the importation of foreign cars is increasing in a marked degree and that the exports for last season have not been double the amount of the preceding year's figures.

The first official record as to the value of imported automobiles and motor cycles is for 1898, when this value reached \$79,014; in 1899 the amount was \$94,600, and it increased to \$103,000 during the following 12 months. For 1901 the total was \$135,600; for 1902 it was \$216,000 and last year's figures show an increase of nearly \$90,000, the amount being \$301,600.

During the corresponding period, the value of automobiles and motor cycles exported by the French was: In 1898, \$349,579; in 1899, \$851,800; in 1900, \$1,883,400; in 1901, \$3,156,400; in 1902, \$6,043,800, and last year, \$10,178,400. Of the eight countries which were France's best customers last year England took the lead and bought over two-thirds of the total amount of exported cars the value being \$6,777,400. The United States occupy the second position on the list with a total of \$1,411,036. Belgium comes third, with \$1,059,800; Italy is fourth with \$585,200.

"We Frenchmen often speak about export trade," says M. Jeantaud, "and we say with reason that the French automobile industry is the first in the world and that the amount of our exports of automobiles passed the 50,000,000 franc mark in 1903. But we forget the other countries which are already sending machines to our country, and are competing with us in our best market."

"Our exports continue to increase, but the amount for last year is not double of the amount of the previous year and as has been the case within the last few years. Have we reached a critical stage and will we not pass in the future, this amount of 50,000,000 francs, which we reached last year? We do not think so. The amount of 50,000,000 francs reached last year shows the vitality of this industry and how much French products are appreciated in foreign countries. However, to keep our lead we must multiply our efforts, because the greatest amount of our exports reach the most industrious nations of the world."

# JUMP

What a swell joke on the old world it would be if Winton Bullet II should go back into the cup race this year and win it.

The chief of the fire department of St. Louis, Mo., wants the city to buy him a \$1,200 automobile. And yet the speed limit in St. Louis is 6 miles an hour!

The city of St. Louis offers "free warfare" to yachts, steam launches and house boats" during the time of the fair. Can it be that St. Louis hasn't yet heard of motor boats?

In the next London-Glasgow non-stop run cars must be brought into the night controls clean from stem to stern. A man with a garden hose could make money just outside the controls.

Anyone who thinks a balky automobile is the only thing on earth that does not always "work" satisfactorily should get one of the kind of stylographic pens with which these "jump sparks" were written.

When the department of transportation at the St. Louis world's fair assigned the automobiles to that part of the transportation building which opens directly upon the Pike, which is the St. Louis Midway, it must just have come from the New York automobile show.

That variety of Cleveland policemen known is the local vernacular as "auto cops" may be equipped with motor bicycles. Then they will probably ride up alongside of automobilists, invite them to race, and when the speed limit is exceeded, arrest them. Thus will the two-wheelers give his big brother the "honk-honk."

The automobile industry is creative of honesty. In bicycle building days some of the workmen had a delightful habit of hugging bicycles part by part out of the factory that machines for personal use might be assembled at home. A man would stand a good chance taking a pressed steel automobile frame out under his vest.

One lone automobilist—Dr. Leisenring—in a western place, was the subject up for discussion at a meeting of sixty farmers in the village a few days ago. It was claimed that the doctor's automobile had caused much uneasiness among the farmers because of their horses frightening at it, so that in convention assembled they passed resolutions requesting that restrictions be placed upon it, and further threatening to refuse to get sick if he did not abide by their demands.

A Denver man asks one of the papers of his city if he would be justified in shooting reckless automobilists. The newspaper in reply concludes its negative answer with the following naive solution of the popular so-called "automobile situation:" "If the police can't arrest the mad chauffeurs, they ought to be able to take the persons run over into custody, so that they may be fined for being slow. It ought to be easy to arrest them, for they will be dazed and stunned or crippled and unable to run away and escape punishment."



One hundred and forty farmers of the vicinity of Wayne, Neb., have pledged themselves to catch, prosecute and mulet automobilists who frighten horses on the public road whether the drivers of the said horses are in, out or getting in or out of the buggies attached respectively to the said frightened horses. The funny part of the lengthy resolutions whereby these farmers have inaugurated their crusade is that bicycles are classed with automobiles as "new fangled vehicles" which create dangers upon the public highway. Wayne agriculturists are about 10 to 15 years behind the game.

Madame du Gast is not the only woman actor playing in hard luck. A b-a-u-t-i-f-u-l member of a musical comedy company has been refused a license in Chicago because she is a non-resident. Now she runs her car without a number and dares policemen to arrest her. Thus far none has had the temerity, but the diligent press agent will probably succeed in causing trouble of that sort before she leaves town.

A local paper in Massachusetts says: "All the village automobiles have wintered well and their owners take as much pleasure as ever in dodging dogs, children and old farm horses." This editor is either sarcastic or looking forward to the days when automobiles will be given in exchange for country newspaper advertising.

Omaha will take no chances. In an automobile ordinance now pending is a provision whereby licensees must give a bond for \$100. Inasmuch as the speed limits named in the same ordinance are 6 and 8 miles for different parts of town, it is probable that a mighty fuss will be soon started in Omaha.

That Fischer truck which in the A. C. A. commercial vehicle test carried a load of 50 half-barrels of beer to Yonkers each day and was able to return in good shape for the next day's task was certainly all right.

The two and three-point ball bearing discussion of bicycle days seems to have its automobile trade counterpart in the discussion concerning the number of motor cylinders that is best.

Commonwealth hill has become so easy for automobile climbers that the Boston motorists might improve their annual hill test by having next year's race up the Bunker hill monument.

Hooray for Australia! On a recent club run of the Automobile Club of Victoria seven of the thirty-four cars in the line were American, nine French and eight English.



# SPARKS

Kansas is O. K. It comes to the front with an "automobile, bicycle, carriage and agricultural implement garage."

Anyway Bobby Walthour, Major Taylor and a few other Americans will give 'em a run for their money in international bicycling about the same time.

A man in middle New York is building an automobile out of parts of old bicycles, harvesters and buggies. Others who have tackled a similar game might be mentioned.

It is not only the racing game that has been struck by the big car fever. Last year at Trenton, N. J., 80 per cent of the applications for automobile licenses were to operate light cars; this year but 3 per cent. Look out for Trenton!

There is a chance that there will be a Darmecq car on each of the French, English and German international cup race teams, this car being manufactured in these countries. What an elegant chance for "team work." Ought to man these cars with old bicycle riders.

The Chicago Tribune has discovered that automobilists should be numbered so that they could thereby convince the public they knew what they were doing. If this same principle were applied to all lines of enterprise a whole lot of people would be put out of business.

That, according to a recent decision, the fines collected from automobile speed lawbreakers in New York city should go to the Society for the Prevention of Cruelty to Animals, means in a way the return of the fines, for surely the greatest ally which the society has is the automobile.

Suggestion for window card in an automobile salesroom:

business up,  
own  
our  
running  
busy  
too  
are  
We  
To  
spend  
time  
running  
our  
competitor's  
down.

Human nature is proving itself to be the same is automobiling as it was in bicycling. Bright spring days made bicycle sales. Every man knew that rain and mud today, it would be bright and dry some day; that the summer would hold many pleasant cycling days. But he put off the purchase of a bicycle until the warm, seductive breath blew on his cheek. Then he blew into a bicycle store and bought a machine in a rush. It is the same in the automobile trade. Hundreds and hundreds of purchasers intend to buy automobiles. They know the summer will come; that they can best provide for it by ordering a car early. Yet they postpone, and business is dull. Then bright, warm weather comes and they rush into automobile stores and want cars on instant delivery.

## WINTON ENTRY IS MADE

**Bullet II Will Be In American Eliminating Trials—Owens May Drive—Benz Car Not Being Ready, No German Trial Events Will Take Place Mercedes and Opel Darracq Only Entrants**

New York, April 18—Alexander Winton's formal entry of Bullet No. 2 for the American team in the international cup race was received at the Automobile Club of America this morning. Mr. Winton, in making the entry, which was accompanied by a check for \$600, says he will not pilot the car himself, but will furnish a competent driver for the contest. It is generally assumed that Harry Owens, of Cook & Owens, the Washington agents of the Winton company, will be the pilot named. Owens was a conferee of Percy Owen in the early days of Winton participation in the racing game and bears the reputation of being a bold driver, a cool and ready tactician and a clever mechanic.

Up to this morning no further entries for the team had been named, nor had Secretary Butler or Charley Wriggway yet heard of the arrival of the Peerless cup candidate, which was reported to have been shipped from Cleveland to this city last Thursday night, though a wire came from Mr. Moores this morning, saying he would be at the automobile club on Thursday.

There is an oft-expressed hope here that the result of H. B. Joy's conference with the Packard company will be the entry of the Gray Wolf for the team. Mr. Joy is quoted as saying on his visit to this city last week: "The Gray Wolf is a wonderful machine for its power. It has gone a mile in 46½ seconds, although of but half the power, for instance, of the Peerless car, which went only a second faster. I know that, with Schmidt driving, the Gray Wolf would go through the race, although Schmidt says we could not win. I am not so sure about it as he is. The car that goes through without trouble is likely to be a light car, and a car that has been tried and not found wanting, like the Gray Wolf. The Americans must finish this race whether they win or not, and the Gray Wolf can do that."

It is probable that the matter of Barney Oldfield's reinstatement will be settled at a meeting of the racing board which Chairman Darlington hopes to bring about tomorrow. The chairman received several replies this morning from board members to his letter submitting Oldfield's application for reinstatement, but refuses to foretell the action of the board by disclosing their contents.

Burney is very anxious for reinstatement and is eager to drive a car in the international cup race. He says that he has had some talk with the Peerless people in the matter, and, on the other hand, that Mr. Joy invited him to visit the Packard factory, and intimated that his company might build a Gray Wolf II for the track circuit if he should be engaged.

The German Automobile Club has decided not to hold an eliminating race for the selection of the third German representative on the team for the cup race. It appears that the manufacturers of the Benz racer informed the club officials that they could not get the intended racer ready in time for the event, while the Neue Automobile Gesellschaft, of Berlin, which also intended to take part in

the race, withdrew a few weeks ago. Troubles of another nature were met by the German club, the local authorities in Schleswig, where a road had been selected, had made so many inconvenient arrangements that the race would have turned out to be a parade instead of a speed contest. Inasmuch as the only other German automobile concern interested in the trial race had informed the officials in Berlin that their cars would be ready, it was practically decided to select one of them without holding a race, and thus the German team will comprise two Mercedes and one Opel Darracq car. The Benz people depended almost entirely upon Madam du Gist to be successful in the preliminary race, and with her forced withdrawal they seemed to have come to the conclusion that they could not have been successful even if their car had been ready.

It is reported that 2,000 rooms have been rented up to date in different hotels and private residences in Homburg. Fully as many rooms are still vacant. Among those who have secured rooms in a single hotel are Prince and Princess Henry of Prussia, Prince Leopold Friederich and Prince Joachim Albrecht of Prussia, Grand Duke and Grand Duchess von Mecklenburg-Schwerin, Prince Hohenlohe-Oberingingen, Duke von Ratibor, president of the German Automobile Club; Roger Wallace, president of the Automobile Club of Great Britain and Ireland; Duc d'Arenberg, Baron de Rothschild, of London; Guy Dinsmore, representative of the Automobile Club of America; Mrs. Gerard Leigh, of the Ladies' Automobile Club of Great Britain. The representatives of the French, Belgian and Italian automobile clubs will also stop at this hotel.

According to a cablegram the following drivers have been selected by the French manufacturers to drive their cars in the eliminating race, which will be run next month: Panhard-Lormor—Henry Farman, Teste and Tarte; Lenoir—Salleron, Leger and Lavergne; de Dietrich—Gabriel, Jarrott and Baron de Forest; Darracq—Beconnais, Baras and Wagner; Gobron-Brillie—Rigolly, Duray and A. Burton; Hotchkiss—Henry and Achille Fournier and Baron de Crawhez; Tureot-Mery—Rougier and La Touloubre; Richard-Braiser—Stead, Caillois and Thery; Clement—Henriot and Weigel.

The eleven racing cars which will compete in the British eliminating trials were registered at the Automobile Club of Great Britain and Ireland last Saturday. They were five Napiers, three English-built Darracqs and three Wolseleys. The Hutton racers were not ready.

L'Auto, of Paris, has completed the arrangements for its Gordon Bennett caravan. Starting from Paris June 12, the Tannus road will be reached June 14, after passing through Nancy, Strassburg and Heildelberg. June 15 will be resting day, and the next day the members of the excursion will see the weighing of the cars and the final preparations. June 17 the race takes place, while the next day will be spent either in going over the course

or in excursioning in the neighborhood. Sunday, June 19, those who wish may go to Frankfurt to see the race meet which will be held in the afternoon. The start home will be made June 20, by way of Luxembourg.

The expenses for the trip, which will last 10 days, will amount to \$92 for those who stop in Wiesbaden, which is only 8½ miles from the circuit, and \$90 if the stopping place is made at Mayence, 18½ miles from the center of the event.

In either locality the member of the excursion will have a front room on the first or second floor of the hotel and the expense also includes the transportation of baggage to the Paris railroad station and all along the line of the caravan, garage of machines and gratuities. The expenses for a mechanic will amount to \$18.

### WILL PLAN BIG PARADE

New York, April 17—The governors of the Automobile Club of America have suggested to the runs and tours committee that it promote a great general parade of motor vehicles this spring. May 14 was the date suggested, but as the speedway and firemen's parades come the same day it is certain that at its meeting tomorrow another day will be chosen. The committee, members and automobilists at large are enthusiastic over the idea, and it will no doubt be carried out on a grand scale.

It is believed that a show of numbers and a display of great aggregate money value will impress legislators, the authorities and the general public with the magnitude of the new sport and industry to the end that more reasonable legislation and less prejudicial enforcement of the law may be secured. Such was the effect of the big bicycle parades of other days.

It is suggested that the parade be segregated by divisions headed by famous racing machine and followed by big touring cars, the middle weight and lighter classes coming next in the order of weight. A classification by motive power will also be made and a provision for a commercial vehicles division also be arranged.

### PROTOCOL IS ARRANGED

Chicago, April 19—There seems to be a truce for the time being in the war between the city of Chicago and the automobilists. Granville W. Browning, who has headed the corporation forces in the campaign, has spiked his heavy guns, and the police have ceased making arrests. Mr. Browning has been preparing two ordinances which he thinks will fit the occasion and be satisfactory to both parties. He was unwilling to state just what the provisions of his ordinances would be when presented to the city council, but said he thought the Chicago Automobile Club would find no serious trouble with them.

Meanwhile Attorney Sidney S. Gorham, now secretary and director of the Chicago Automobile Club, has been going on quietly with his fight, using injunctions to circumvent what the club considers the illegal acts of the city officials. The method used in the Banker injunction case has been followed, Mr. Gorham going a step further. I. V. Edgerton was arrested Tuesday a week ago for running his automobile without a license number and Mr. Gorham immediately went before Judge Hancu and secured an injunction making Mr. Edgerton immune from arrest. Then Mr. Gorham

began his plan of making the other members of the Chicago Automobile Club co-complainants in the Edgerton case, at the expense of the club.

Mr. Gorham has been engaged in the latter phase of the business this week, getting the permission of the individual members to enter them as co-complainants. Mr. Browning says the ordinance injunction granted to Banker in last year was a "snap" affair, in which due notice was not given the city.

Fourteen cars took part in the first run of the season for the Chicago Automobile club, Saturday. The party left the club house soon after 2 o'clock and traveled to Riverside by way of Oak Park, and then to La Grange, where a short stop was made. The procession then proceeded over the A. A. A. route towards Joliet and returned, getting back late in the evening. The weather for the trip was the best this spring has yet produced and everybody was satisfied. A trip to the southward 10 days or so hence will probably be the next event on the club programme.

### STRICT IN OMAHA

Omaha, Neb., April 16.—At the city council meeting held Monday the automobile ordinance was taken up. It provides that owners must secure a license from the city clerk, and that the fee will be \$2. At the time the license is issued the owner must deposit a bond of \$100. A speed of 6 miles per hour is permitted in the city, from Izard to Leavenworth streets and from Twentieth street east to the river. Eight miles is the maximum speed at which motor vehicles may be driven in other sections of the city. Every motor car must be provided with a bell, gong or horn, which must be sounded at crossings, bridges and other dangerous points along a road or street. Cars must have a brake efficient enough to stop the vehicle within 10 feet when it is being driven at 8-mile speed. The front of the automobile must be equipped with one or more lamps, which must be lighted from dusk to dawn. A car must display a number in the rear; the number must be in white upon a black back and be 5 inches high. Two extra lights must be provided on the rear of the car; one red, which shall throw light directly behind, and the other white, which must shed its rays upon the number. Violation of the ordinance renders the offender liable to a fine of from \$5 to \$50.

### SWELL PRIVATE GARAGE

Rome, N. Y., April 16.—S. B. Stevens, a young millionaire of Rome, has added the sixth motor car to his garage. Stevens is the man who drove so cleverly at Ormond in his 60-horsepower Mercedes as to excite international interest. Mr. Stevens' new machine is a 20-horsepower Darracq Indianapolis, costing \$9,000, for the use of his mother. He now has two electric, one a single seat and one a survey; a Winton of 1903 pattern, a Gasmobile and the 60-horsepower Mercedes, and to this number he will shortly add a 20-horsepower Darracq chassis, which will be converted by him into a runabout. Mr. Stevens, as a part of his garage, conducts a private machine shop with tools of a value of over \$5,000, and he does all his own repair work and alterations. Later in the year he will add a racing car for use at Ormond, which will be the fastest that money can secure.

## MERGER SURE TO CARRY

### Indications Point to a Unanimous Vote on A. A. A.-M. L. Consolidation Scheme

New York, April 17.—Formal notice has been sent out to the members by both the American Motor League and the American Automobile Association, asking for a mail vote on the proposition to amalgamate the two bodies in a new organization to be known as the American Motor Association. Secretary S. M. Butler, of the A. A. A., and the Gordina knot of the dilemma occasioned by the refusal of Secretary Gillette, through alleged conscientious and constitutional scruples, to carry out the directions of the A. A. A. directors in the matter, by seeing that the proper request accompanied by other plans of merger agreed upon was put in the mail. The members of both bodies must vote by April 30 or have their votes counted in the affirmative.

"Neither the constitution of the A. A. A. nor the A. M. L. has anything to do with the matter," said President Potter, of the A. M. L. "This is a new and independent movement, set on foot and approved of by the duly accredited representatives of both bodies. It is an amendment of the constitution of neither. We are joining in organizing a new body. The leaders of both associations and their members, too, are in favor of a new body being formed at once and resolved that no petty technicalities shall delay its accomplishment. So far as the A. M. L. is concerned, the replies that have been received are unanimous in favor of the merger. The A. C. A.'s action is unanimously endorsing the amalgamation indicates that the same view is being taken by the A. A. A. clubs."

"One of the first and chief things we will have to provide to make the new body a success," says Secretary Butler, of the Automobile club, who with President Potter, of the A. M. L.; Emerson Brooks, of the A. A. A., and another to be named by the A. M. L., will draw up the constitution and by-laws of the new American Motor Association, "is an efficient bureau of road information to furnish routes and maps to the members. Just as in the days of the L. A. W. will the A. M. A. members demand an actual return for their dues. You can form no idea of the extent of the demand for this sort of information. If the A. M. A. can supply it a big membership is assured on that basis alone. Each state division should have its own bureau of road information, sending out maps and routes to all its own members without request and ready by a system of exchange to furnish like data for any state asked. At the head of these bureaus should be competent enthusiasts of the type of Augustus Post, and the state engineers should be induced to become ex-officio members of the bureaus and keep them supplied with official road and survey data.

### BOILER INSPECTORS VIGILANT

Minneapolis, Minn., April 18.—"We never sleep; our mission on earth is to make trouble for the automobilist, and we hope we succeed in our humble endeavors." So would any the Minnesota boiler inspectors, if they were allowed to speak to automobilists. But as the rule the latter pass by with noses in the air and

without a sign of recognition. Some say the boiler inspectors, placed in office by the grace of Governor Van Sant, have caused that dignitary more trouble in a given space of time than any of his other appointees. Certain it is that they are endeavoring to enforce the automobile law. When Inspector Johnson, of St. Paul, announced through the newspapers a few weeks ago that an owner of an automobile, who had taken out a license last year, need never bother about another, there was rejoicing over the prospect of being able to think no more of the inspector, and his penchant for phoning the state seal on untaxed cars.

But now he comes out with a manifesto, proclaiming that there are over thirty automobiles which he is after; that he "has a little list" of those whom he before had missed. He has also discovered that dealers and some other people have a habit of shifting numbers from one car to another. Result—hereafter all numbers are to be screwed, bolted, soldered or padlocked to the car on which they belong.

To the consternation of Minneapolis motorists, Inspector Steele, of this city, bids fair to be a second Johnson. He has stated in no uncertain terms that he intends to enforce the law; and when a Minnesota official pretends to do that, it is wise to get under.

The influx of new machines has been great this year, and there are undoubtedly scores of unlicensed cars in the two cities. The owners raised vigorous protests last year against the high-handed attitude which Inspector Johnson assumed, but it is doubtful if the inspectors will resort to the state seal to secure obedience to the law from those who have not yet complied with its terms.

### RACES AT CHARTER OAK PARK

Hartford, Conn., April 17.—Sanction is to be asked for an automobile race on the Charter Oak park track for Decoration day. Welch and Jones, owners of the track, have taken up the subject and will offer a program of much sport. Since this is the first automobile race to be run in Hartford, there is prospect of large attendance. The big class will have Eddie Bald, James Joyce and perhaps F. A. Law driving stripped big cars, with some other entries coming from the Locomobile factory. Another class will be for two-cylinder cars, and Engineers Maxim and Alden will drive Columbias against Autocars driven by Fred Dard and Al Sisson. There will be a class of Pope-Hartford cars with test bodies, an Olds and a Knux class, as well as classes for steam cars and motor bicycles. No little interest is centering in the meet and it is expected that entries and attendance will be large.

Dr. Henry C. Bullock, whose name spells "horse" in the east, and who has owned some of the smartest harness horses to come down the grand circuit, has sold his entire horse outfit, live stock, carriages, sulkeys and rub rugs and bought an Antcar. For this action there is talk of expelling him from the Gentlemen's Driving Club, of which he has been trustee, and he is daily being called upon to defend his action. The doctor is versed with clean-cut epigrammatic speech and when he and Dr. Gardiner, a veterinary surgeon, met yesterday the fur flew.

Manager S. Z. Poll, of New York, New Haven, Hartford, Bridgeport and Waterbury, is perhaps the first theatrical impresario to make the rounds of his very many theaters in an automobile.



## RHODE ISLAND LIBERAL

### Satisfactory Automobile Bill Passed By the Legislature of the Little State During Last Hours

Providence, R. I., April 16—The feature above all others during the past week in automobile circles in this state was the passage April 13 of an automobile bill by the assembly. On the last day of the session the bill was crowded through and is generally satisfactory to automobilists. It is probably one of the most unique examples on record of a piece of automobile legislation, as it contains absolutely no mention of the matter of speed. It is simply an act providing for the registration of automobiles, although there is a clause which gives town councils the right to bar automobiles from certain roads provided these roads are not state highways or do not lead from town to town. The penalty is \$20 fine or imprisonment not exceeding 3 months.

The bill calls for the registration of automobiles with the secretary of state, the certificate to cost \$2, but every manufacturer or dealer may have assigned to him a distinguishing mark, which he shall display on all machines owned or controlled by him, and the certificate will cost the dealer or manufacturer \$10. Any automobile registered in another state may be operated in Rhode Island without extra charge. All machines must be locked when left standing and lights must be displayed after dark. All machines must be registered before June 1.

The passage of this bill, which was drawn up by one of the members of the Rhode Island Automobile Club, settles a question which has been much discussed here for 3 years. The Kane bill, which prescribed speed limits, and also called for licensing of operators, was so badly mangled by the house 2 weeks ago it was pigeon-holed by the senate committee, and at the last minute the bill was enacted.

For the first few days following the passage of the bill there was a great scramble among the automobilists of the state to get in applications for certificates, all of the applicants desiring to obtain some of the first numbers. Promises were made for the first seventeen by the secretary of state. This official today went to Boston to learn of the operation of the law in Massachusetts and to get ideas as to the proper questions to ask on the certificates.

### ENTERTAINED MANY FRISCANS

San Jose, Cal., April 15—There was unusual activity last Saturday and everybody was on the qui vive for the automobilists from Frisco that were coming a hundred strong. It was the first run of the season of the automobile club of California, and San Jose had been chosen among a score of other localities as the spot best suited to visit. Splendid weather favored the San Francisco motorists, who began to arrive during the latter hours of the afternoon, the last one reaching the Hotel Vendome at about 8:30 o'clock. Over a hundred were in the party at the hotel.

The visiting motorists went over the valley during the morning hours and started home in the afternoon. Many of Frisco's prominent people were among this touring party. Speaking about the future prospects for San Jose, Manager Brooks, of the Hotel Vendome, said:

"San Jose is anxious to become the automobile center of California. Only 2 hours, possibly a few minutes more, separates us from San Francisco, the roads around here are ideal, and there are no vexing speed ordinances, which make it impossible for the motorists to enjoy an outing. Accommodations are plentiful and the people will be glad to see the visiting tourists. At the hotel we had an automobile shed big enough for five machines. So many excursionists came that we had to decide at once to build an additional barn, which is now completed and can accommodate within its 80 by 20 feet about thirty big cars. A neat little circular is being printed showing the new garage and also giving general information concerning Santa Clara county. Within a short time a map of this county will be inserted, which will be of great help to the tourist. The supervisors of the county have expressed their willingness to co-operate in putting all the roads in first class shape. We are all going to work hard around here to make this an automobile paradise."

### KENTUCKIANS HAVE A TRY-OUT

Louisville, Ky., April 15—The annual meeting of the Louisville Automobile Club, held Thursday, showed a gratifying and rapidly increasing interest in motoring affairs in the Kentucky metropolis. The meeting was preceded by a run down the new boulevard to Fountain Ferry park, 5 miles out on the Ohio river. A mild, sunny day following protracted April rains favored the club's plans and brought out a long string of cars filled with motorists and their families and friends.

To stimulate automobile interest, the local dealers had been asked to bring their new cars for inspection, a feature which proved a very happy thought, the automobilists being enabled to examine the late models and note comparatively their running qualities as they were put through their paces on the fine Fountain Ferry three-lap track.

A supper was served to the members of the club in the park cafe at 7 o'clock, following which those assembled went into executive session. Herman Nettleroth, Harrison Robertson, George H. Wilson, Biscoe Hindman and Dr. James B. Bullitt made pertinent and interesting speeches. Officers and committee reports demonstrated a wide scope of activity for the past year. That of the committee on legislation showed stout efforts for the attainment of fair state and city automobile laws. Its good work was manifested in its influence in the law just passed by the legislature permitting a speed of 15 miles per hour on the highways, and other reasonable privileges.

The report of the secretary showed an enrollment of fifty-four members, with prospects of a large increase in the near future.

Officers for the ensuing year were elected as follows: President, George H. Wilson; first vice-president, Biscoe Hindman; second vice-president, Dr. James B. Bullitt; secretary, Dr. W. C. Pilgert; treasurer, M. Robinson.

### SOUTHERNERS IN A. A.

The Virginia East Coast Automobile Association, the Virginia Beach Automobile Association and the New Orleans Automobile Club were recently admitted to membership in the A. A. A. The Virginia East Coast Association is making preparation for a floral street parade of automobiles to take place Memorial day. It will be the first parade of the kind held in Norfolk, Va.

## MANAGER SANGER DEAD

### Promoter of All the New York Cycle and Automobile Shows Expires Suddenly on Monday

New York, April 19—The death of Frank W. Sanger, manager of Madison Square garden, which occurred yesterday, was a shock to automobile trade men and old-time cycle show exhibitors, all of whom had known him as a fixture in exhibition matters.

Mr. Sanger was sick only a few days, few even among his intimate friends knowing of his illness. A cold developed into pneumonia and on Monday afternoon the end came.

Mr. Sanger was born in Framingham, Mass., in 1849 and in early life was an actor—a very bad one, he always told his friends. He became manager of and interested in many great amusement enterprises, including the Grau Opera Co., the Metropolitan opera house, the Empire theatre and Madison Square garden.

Three years ago Mr. Sanger resigned the management of the Metropolitan opera house and the Madison Square garden, but the directors of the latter insisted upon him retaining his title and doing as much or as little as he liked. He was not under a regular salary, but each year the directors sent him a check, which, in his own words, "was always a very satisfactory one."

He took decided interest in the automobiles shows and assumed more command over these events than any others held in the garden. Contrary to general opinion, he did not receive the profits from the automobile shows, these going to the garden company. Barring the one failure at the Grand Central Palace, Mr. Sanger has managed every cycle and automobile show ever held in New York city and the success of the events indicates his ability as a manager and business man.

Mr. Sanger was keen in business transactions and a companionable man. He leaves a widow and a son 19 years of age. The value of his estate is not given, but is known to have been large. Mr. Sanger's death will have no effect on the next automobile show, as arrangements for that have already been perfected.

### KNOXVILLE MOTORISTS INCREASING

Knoxville, Tenn., April 18—There are now running in the city of Knoxville thirty-five automobiles. This is a small number considering that the city has over 32,000 inhabitants, but it fairly creditable considering that there were not over a dozen here a year ago.

By the end of the year there will be many more, for the present indications point toward a large business this year. Knoxville does little or no business with surrounding towns, but the two dealers expect to be kept busy handling the local trade. These dealers are the Schultz-Horn Co., selling the Cadillac, and Rogers & Co., handling the Olds. The former company has recently spent \$5,000 improving its building and equipment and now has a garage which compares favorably with any in the south.

Unfortunately for Knoxville, the roads leading out of the city are, as a rule, far from good and the demand here will undoubtedly be for light machines, which will be used about the city. In fact, the only large car in the city is a two-cylinder Toledo. The fight for good roads has been begun by the automobilists in this section and it is expected that they will have great influence in improving the roads.

An automobile club is now being organized in Knoxville. A preliminary meeting has been held and a committee is now working on a constitution and by-laws.

Last year a few races were held here, but they amounted to but little and no interest seems to be taken in that branch of the sport. Much more interest is shown in touring, in spite of the roads, and there is now a Cadillac headed toward the city, which has been out carrying a party of people through Georgia and Alabama, since the first of January.

### BOOST FOR HOME INDUSTRY

San Francisco, Cal., April 16.—It does not happen very often that the owner of an automobile which has cost more than \$10,000 disposes of it and buys a motor car which is valued at possibly less than half the former quotation. This happened, however, last week when ex-Governor James Budd bought a White touring car and disposed of his 16-horsepower Mors vehicle which had cost him between \$15,000 and \$18,000. A good boost for home industry. The French machine will be added to the ranks of "for rent" vehicles.

Lewitt & Hill, the bicycle jobbers, have taken the agency for the Knox. The National Automobile Co. handled the car before, and has only the Franklin and Toledo at present, the Autocar being in the hands of the West Coast Motor Car Co. and the Rambler being sold by Fred A. Jacobs.

There is a rumor going around that Gus Boyer will soon be the agent for the Toledo, and have northern California to work in. The local agent for the Cadillac, Cuyler Lee, reports some good business the last few days, and other dealers are also in a good humor concerning the way business is going.

### SHOWS MARVELOUS GROWTH

A French automobile and bicycle tire manufacturing concern advised its customers recently that when it started in business in 1899 the factory occupied 13,200 square feet of ground. At the end of 1901 the enlarged factory occupied 24,200 square feet of space; at the end of 1902 the additional buildings covered 41,800 square feet, while at the end of last year the space had been increased to 237,050 square feet. The output of tires during those years was as follows: In 1899, 48,850; in 1900, 65,420; in 1901, 91,836; in 1902, 131,119; in 1903, 150,293. During 1900 the concern added forty-seven men to its force, during 1901 sixty-two, during 1902 seventy-nine, in 1903 ninety-one and this year 170. In 1900 the concern had a shop engine developing 10 horsepower; it was taken out in 1901 and a 15-horsepower motor put in its place. The following year a 35-horsepower machine was put out, and last year one of 136 horsepower. Last January this was replaced by an engine of 500 horsepower.

### LATE PITTSBURG SHOW

Pittsburg, Pa., April 18.—Pittsburg is to have an automobile show. It will be at an unusual time, the second week of May, but its promoters think this will not be too late to make it a profitable venture. The exhibition will be held May 14 to 21, inclusive, and will be made up of automobiles, motor boats, motor cycles and motor accessories of all kinds. The place of holding will be the Pittsburg exposition building, which is a permanent exhibition structure centrally located. Space will be sold for 50 cents a square foot.

## STRONG ON GOOD ROADS

### Delegates From Many Southern States Assemble at New Orleans and Exhibit Enthusiasm

New Orleans, La., April 16.—The most important good roads convention ever held in the south ended its two days' session last week amid much enthusiasm and the belief that splendid results will be the reward for the promoters of the convention, the 200 delegates who came from five different states, the people from the large and small cities and towns, and especially for the farmers.

Progressive Union hall, at 311 Baronne street, was selected as the meeting place less than 24 hours before the opening exercise of the great convention. It was chosen because Tulane hall was considered too small to hold the several hundred delegates and other invited guests and officials. They came from all over Louisiana, Mississippi, Tennessee, Alabama and Texas as official delegates, and from many other states as invited guests.

Shortly after 10:30 o'clock in the morning M. J. Sanders of the Progressive Union called the convention to order. Governor W. W. Heard then addressed the convention, welcoming it in the name of the people of the state of Louisiana and dwelling at length upon the object of this great gathering of road friends. Amid loud cheers W. H. Moore, president of the National Good Roads Association, followed the governor in the speech making. He urged that good road organizations be formed all over the different states and then to go after the congressmen and senators who will very likely pay much more attention to requests made by organizations than by individual demand. "What they want is your vote. Now, tell them that they must support the cause of good roads; that they must take the matter to congress and make a national matter of it. The Panama canal is going to do this city and this country a great deal of good, but the good it will do will be as nothing compared with what good roads would accomplish, for the matter of good roads affects every person in the country." President Moore also suggested that the white and black convicts be used in the refraction and building of the roads.

The other speakers of the day were: John Dymond, president Louisiana Good Roads Association; Lieutenant-Governor Albert Estopinal; John C. Claire, industrial agent for the Illinois Central railroad; M. Eastman of Calcasieu parish, and others.

At next day's session of the convention Colonel J. B. Killebrew, ex-commissioner immigration and agriculture of Tennessee, was the principal speaker.

President Stuyvesant Fish of the Illinois Central railroad spoke briefly in the afternoon, while the other speakers of the closing days of the convention were: Dr. Alderman, president of Tulane university; M. A. Hays, land and industries commissioner of the Southern railway; Senator James Clinton, of Natchez, Miss.; Secretary R. W. Richardson of the National Good Roads Association; Colonel A. S. Mann, a Florida road builder and one of the vice presidents of the national organization. Resolutions were then adopted and the convention ended with the forming of a state organization, of which John Dymond was elected president, Henry Mayo secretary and Theodore Grune-

wald treasurer; committees will be chosen later.

Thirty-five of the prominent delegates were invited by the automobile club for a run around town and over the roads in the vicinity. As the weather was fine it proved a pleasant affair.

There was much individual talk during these two days of convention and the most interesting matter discussed was certainly the project of building a 20-mile speedway for automobiles.

### OHIO HAS HALF LAWS

Cleveland, Ohio, April 18.—The Ohio senate has passed the Overturf automobile bill and it is now half a law. Whether it will survive a contest in the house is a question. A short time ago the house passed the Bassett automobile bill, which was conceded by operators and manufacturers to be an excellent measure. It has been hung up in the senate, however, and now each branch of the general assembly has made half a bill of its own. The result may be a conference committee on the subject of automobile regulations, or it may be that both sides will be stubborn and both bills may die a natural death.

One of the curious provisions of the Overturf bill is that when the automobilist passes any domestic animal which shows signs of restiveness or fright, he (the chauffeur) shall at once shut off the exhaust from his engine and "shall speak in mild and assuring words to such animal being managed."

The bill does not specify what "mild and assuring words" shall be whispered into the ears of skittish colts to convince them that the passing of a puffing automobile is really no occasion for coyly shying to the roadside or running away.

The automobile speed limit is fixed at 8 miles per hour in cities and 15 miles on country roads.

Whoever operates his automobile on any highway in the state shall have displayed conspicuously thereon in letters and figures not less than three inches high, the name of the county in which such automobile is recorded and the record number. The county recorder shall keep the records and issue licenses to automobilists.

### PASS THE RACING GAME

Mr. Morgan, a member of the Automobile Club of Great Britain and Ireland, recently expressed the wish that in future the club pay less attention to road races of the Gordon Bennett type, because, "although very useful in the earlier stages of the automobile industry they appear to many of us to have passed their period of usefulness." S. F. Edge, the English racing man, answering Mr. Morgan's argument, said he also thought the tiffity of such races dying, but at the same time the club is doing well in assisting British manufacturers to recapture the trophy. "Personally, I would rather spend my time otherwise than in preparing for and competing for any Gordon Bennett race," writes Edge. "But as a manufacturer I had to recognize its influence, and the two largest contracts I ever received for Napier cars, one from America and one from France, were absolutely the direct result of winning the Gordon Bennett race. I admit that it seems curious why one should have orders for touring cars because a racer wins the race, but it is a fact, and one that has been recognized by club officials, but at the same time I now think that touring competitions and competitions to bring out the good points of the car for the average user are of the greatest importance and desirability."

# MANY CALIFORNIA DEALERS

## City of Los Angeles Simply Bubbling Over With Automobile Establishments, Yet the Majority of Them Seem To Bear Evidence of Immense Prosperity

Los Angeles, Cal., April 15.—New firms are getting into business here with startling frequency. Los Angeles has been the best city in the country the past year for selling automobiles and people are anxious to get in on the ground floor, evidently. Thirty thousand dollars was the profit one automobile house is reported to have made here last year. Then there were others who report sayeth last money.

The newest local house is the Western Motor Car Co., with the state agency for the Thomas and southern California agency for the Northern and Toledo cars. The temporary store is at 730 South Spring street, and the manager is Earle Anthony. The company is a close corporation with \$100,000 cash capital. The five directors are Earle Anthony, his father and mother, and Mr. and Mrs. R. P. Hillman. Charles E. Anthony, the father, is president and Mr. Hillman secretary and treasurer. The latter has for some time been paying teller in one of the local banks. Young Mr. Anthony owned a Locomobile some years ago, but has had no practical experience in the automobile business. A car load of Northern runabouts has been received and a Thomas demonstrator is on the way here. The Western Motor Car Co. intended to adopt the name of the California Motor Car Co. but found a previous corporation of that name located in this state. The name Pacific Motor Car Co. met with the same fate.

As there is a Western Garage in this city and a West Coast Motor Car Co. eastern correspondents should not get the three names mixed. The Pacific Motor Car Co. is located in San Francisco and there is a Western Automobile Co. in San Francisco. Mail service from coast postoffices is very bad, so these similar names will bother some.

A. P. Worthington, of Cleveand, O., who established a coast agency for the Stearns in this city a few weeks ago, has now opened a storage and repair garage in connection with the Stearns agency at 120 to 126 East Ninth street, only a half block off Main street. The building was built for an automobile garage and is well lighted, with all modern conveniences. The Stearns is becoming favorably known and several cars have already been sold.

The repair shops have had some shanking up of late. E. R. Riden, the bicycle man now owns the Olive & West establishment at 651 South Broadway and Harry Olive is back with Norman W. Church, the Stevens-Duryea and Cadillac agent. Guy West is for the present with Riden. The name has been changed to the Western Garage and the north half of the building has been given up and is now the California agency of the Haynes-Apperson, the street address being 649 South Broadway and J. A. Rosewell is the agent.

The Swain Automobile Station has been combined with the Nevada livery stable, a half block further south on Broadway, and W. E. Swain has retired to take up his other business, that requires all his time. Charles Bogenschneider, of 919 S. Main street, has retired from the automobile business and rented his place for a furniture emporium.

Mills & Chick, of 651 San Pedro street, still

find their repair shop growing and have twice enlarged. They have built two automobiles to order and rebuilt a number, but have given up building motor bicycles.

Alfred C. Stewart has found his repair work so popular that 16 of the best workmen obtainable are kept busy. There are few automobile repair shops anywhere so well equipped. Mr. Stewart is building automobiles to order and has lately patented a novel spark plug. Frank A. Garbutt, the local amateur, who scored so many victories last year with White steam cars, is having a gasoline racing car built at Stewart's that will cut quite a figure in coast racing this season and may be seen in the east. The car will be long, low and similar in appearance to the Winton Bullet No. 2. Garbutt's car will weigh about 1,900 pounds and is built for road use as well as track.

The Roadrunner Automobile & Power Co. is the name of a new corporation in this city which is to build both runabouts and touring cars that will bear the name of "The Roadrunner." S. P. Smoot, one of the incorporators, has been building the Roadrunner bicycle for several years. The other directors are F. A. Stephenson, C. W. Raymond, B. S. Shaw, and John Albright.

The Shepherd Automobile Engine Co. factory will hereafter only build gasoline delivery wagons, not having time to turn out runabouts. About fifty delivery wagons have been ordered and the Brennan motor will be used.

The Automobile Vehicle Co. is busy these days assembling 1904 cars. It is behind on orders and it will be another month before it catches up. The 1904 models are handsome. Most of the parts are made in the factory. The only part of the cars ordered from the east are the wheels, tires, coils and axles.

W. C. Schroder has secured space adjoining the Automobile Delivery Co. garage on East Ninth street, to show the Dumont. He will sell the Dumont at \$2,000, paying the freight and not making the usual \$150 addition to the list price other California dealers do for freight.

The West Coast Motor Car Co., which succeeded to the business of Heinemann & Pratt, closed last August by a receiver, has lately taken the agency for the Columbia. None of

the big Columbias has been sold in southern California as yet, although a demonstrating car has been here for months.

The double cylinder Rambler touring car has made a great hit already and nearly twenty have already been delivered in this and adjoining towns by W. K. Cowan, the southern California agent. At Long Beach, one of the coast towns, four have already been purchased.

The Los Angeles Automobile Co. has at last begun to sell automobiles. This concern has been in business about a year and has had a run of the Knox, Northern, Elmore, General, Peerless, Rockmobile and Duryea in addition to the Ford, with which it is now doing well.

A. P. Fleming, secretary of the Automobile Club of southern California, had taken the agency for the General, but was not selling any and he resigned the agency to the Stamms, who sold about a half dozen before the General factory went under.

N. W. Church has been at home in his new garage for several months now. Church seems to be doing better with the Stevens-Duryea than any other of his numerous agencies. He has not had a Packard in stock for many months and for a big car has the Peerless. Church has sold several of the 1904 Knox double cylinder touring cars and one Knox delivery wagon.

Norman Church made a splendid record with the St. Louis runabout last year, but somehow Woodill & Hulst Electric Mfg. Co. captured the agency last fall.

The branch house of the Goodrich people has had a big business in tires since it opened early this year and the Diamond Rubber Co. will probably be the next tire maker to open a branch here. Vice-President Miller was in town the first of the month looking up the situation with Donald McKay, the Diamond traveler in this territory.

Vice-President Parker, of the Hartford Rubber Works, was in this city late last month on a flying trip and was shown over southern California by H. O. Harrison, of the Williams Rubber Co. Mr. Harrison was until last year the Hartford traveler in the coast territory.

The Williams Rubber Co. is now located at 635 South Main street, but growth of business has made it necessary for it to have a building built which it hopes to occupy inside of 60 days. For several years W. G. Williams had a store at 528 South Broadway, but his business of repairing tires grew so that it was decided to incorporate and take in new blood. Now there are two Williams and two Harrisons, a pair of brothers, and nearly a score of other workers and bicycle tire work is almost forgotten in the great amount of automobile tire work, house manufacture, etc.

The White garage, although strange as it may seem, is about the whitest thing in California, for it is white outside and white inside, and many of the automobiles are white all over, too. The message is made up of Capt. H. D. Ryus, who is the manager, and his carefully chosen staff. Manager Ryus was formerly captain in the United States army and also quite a success as a football captain. He is from the Kansas university and has chosen another Kansas university man, Robert Atkinson, for his general assistant. The demonstrator is Sam Thies, who has sold Whites all over California and Antoinette and Knox gasoline cars all over southern California. Before the automobile game began Sam Thies was in the machinery and steam engine business and, besides being a perfect driver and a good salesman, he is a master mechanic. The



MOTOR AGE THE PACIFIC AS SEEN BY LOS ANGELES  
MOBILEITY MOTORING

testing department is in charge of George M. Adair, formerly of San Francisco. "Robin" Adair has several assistants, as many who visit southern California will not ride in anything but White cars. It was Adair who, when brought before a local judge for searching, claimed that it was justifiable, for he was carrying Mrs. George Glend to the Santa Fe depot to catch her private car and the time was limited. The judge said Adair was right and so he cut off half the fine.

The White garage repair department is in charge of Andrew P. Wetzelauer, a master me-



THE WHITE GARAGE AT LOS ANGELES, CAL.

chanic, who was formerly in charge of the White agency here. The staff at the White garage has not been idle since the new establishment was opened early in January. Actual count shows over 30 White touring cars have gone out to customers in less than 90 days, and at this writing the sales are averaging nearly one car a day.

#### CATCHING UP ON WORK

Hartford, Conn., April 17—The all-night gang in the factory of the Electric Vehicle Co. has been let go. The best workmen of the night shift have been added to the day force and some of the day men have been dispensed with, though some of the members of the night staff have been given work in the assembling department. Superintendent Joyce found that the product of the night force was disproportionate with day work, while shop expense was almost double. The force is now working until 10 at night, and some work has been given to outside concerns. The product of the Electric Vehicle Co. is coming fast. A dozen of the big cars will be delivered this week and a flock of them is in the paint shop. It was most pleasing to the engineers of the company that the first motor of the four-cylinder type to go into this year's car showed 40 horsepower though rated 30-35.

The new Mark LX electric runabouts are being delivered in numbers. The Hartford boat carried two on their way to Tien Tsin, China. The cars have been ordered by an English firm doing business in the Orient. The same steamer took H. W. Alden and the light gasoline two-cylinder Columbia to New York, from which port Mr. Alden drove the car to Philadelphia.

It will be pleasing to friends of Eddie Bald to know that he is keeping everlastingly at it, and that he gives promise of making good as a driver. Bald has been at the shop of the Electric Vehicle Co. learning the game since the Chicago show. He has now been added to

the testers of cars and is doing good work. A great frame and other details of a racing car have been ordered and work will soon begin on a speed car for Bald to drive on the track.

Automobiles formed one of the principal features of the Mardi Gras parade incident to the opening of the military, merchants and manufacturers' carnival Saturday evening. All sorts of vehicles were in line, with passengers attired in the most grotesque fashion.

Fred C. Billings, of the Billings & Spencer Co., maker of drop forgings used by many automobile manufacturers, and Engineer Johnson, who designed the old Toledo steam car, have a model of a new gasoline two-cylinder car which promises success. The car is now being given tests.

The big four-cylinder air-cooled motor, the product of Jones, who claims the development of the Knox waterless, and which has been built in the factory of the American Hardware Co. in New Britain, has been given road trials and appears to be a demon. Jones claims to have struck it with the best cooling device brought out. The car is being thoroughly tested. Several other models are also being worked out in the Russell & Erwin factory of the hardware trust.

#### RAILROAD AUTOMOBILE TRIED

Boston, April 16—The first real practical test to be given the Oldsmobile railroad inspection car in the east was that experienced by Roadmaster Haskell, of the Boston & Albany road. The car was delivered recently and immediately submitted to a most severe test, F. H. Peabody handling the throttle. This car was the one displayed in the recent Boston show, and which there attracted attention. The trial trip was from Pittsfield to the New York state line, a distance of 20 miles. On this trip the car worked to perfection, gliding along the rail without a hitch or a skip and operating the black system of signals and the spring switches,

a surprise to the roadmaster, and also furnished rear protection to the car. After this trip the car was tried out on the steepest grade on the road, that from Pittsfield to Hinsdale, on which stretch it is necessary to use two locomotives on all trains. Here the car proved itself all that could be desired, and as a result of these two trips Mr. Haskell expressed himself as well satisfied with the work accomplished. The car is geared to 40 miles an hour and with the four passengers carried on this trip it repeatedly traveled miles in 2:15 on the level and 2:35 on the incline, with Roadmaster Haskell at the throttle, this being his first experience with a motor vehicle. Mr. Peabody says the sensation of driving the car along the rails is most peculiar, and especially to one accustomed to driving a vehicle.

Mr. Haskell is confident that by the use of this car he can transmit his daily work in less than half the time now used, owing to the delays in train connections.

#### GOOD BUSINESS IN PROVIDENCE

Providence, R. I., April 18—The Thomas & Lowe Machinery Co., of this city, has had considerable success in selling the Autocar, for which it has an agency over an extensive territory. Up to the present time it has disposed of twenty-three orders, and all but six of the cars have been delivered. A. S. Hitebeck, who last year was the local representative for Shattuck & Co., who had automobile stores in Lowell, Boston and Providence, but who are now out of business, is attending to the sale of Autocars for the machinery company, and in spite of the fact that he has no garage or salesroom he has received almost as many orders up to the present time as he did for the entire season last year. The Thomas & Lowe company has as territory in which to work all of the state of Rhode Island and the biggest parts of Plymouth, Bristol and Barnstable counties in Massachusetts.

The local agents succeeded in converting with the factories this week much to their own advantage. For some time a large number of orders have been in for machines, but they have not come and the eager amateurs have been clamoring at the garages for their machines. Six Autocars arrived from New York by steamer; six Wintons are in after a long journey; three Franklins are also on the list of new arrivals; five Knox machines came in also, two Stanleys, three Cadillacs and two Waverley electrics.

## LATIMER BILL REPORTED

### Senate Committee Will Unanimously Recommend Its Passage at the Next Session of Congress

Washington, D. C., April 18—As a result of the splendid fight made by the good roads advocates during the present session of congress the senate committee on agriculture at its last meeting decided by a vote of six to one to report favorably the Latimer good roads bill early in the next session of congress. This is a decided victory for the good roads propaganda and presages national aid in the near future in the building of good roads. Those voting in favor of the bill were Senators Foster and Quay, republicans, and Bate, Money, Simmons and Latimer, democrats. Against the bill was Senator Proctor, chairman of the committee.

Inability to agree upon a report prior to this time was due to a difference of opinion among senators as to the proper amount of money to be made available to each state under the proposed law. An agreement was made whereby it was decided to amend the pending bill by fixing at \$100,000 the minimum appropriation which each state shall first receive and then share in the balance of the appropriation in proportion to its population. Provision was made, however, that no city shall be credited with more than 10,000 population. The purpose of this is to limit the appropriation for states having large cities. This provision is to offset the effect the population of great cities would have in determining the amounts to be received by a state. The bill is intended to aid in the development of country roads, of course, and the limit placed upon the calculation of city population is expected to simplify the enforcement of the law.

Another important amendment to the pending bill is the elimination of the word "territory" wherever it occurred after the word "state" in the bill, thereby excluding all territories from any participation in the benefits of the act.

The good roads cause having achieved its first victory, it now remains for the advocates of the cause to redouble their efforts during the months intervening between the next session of congress to keep alive the interest now manifested in the pending bills to the end that the matter receive favorable action when the time comes to vote on the proposition.

### TO WIND UP CENTURY COMPANY

Syracuse, N. Y., April 18—Harold Stone, son of Referee in Bankruptcy Charles L. Stone, has been named trustee in bankruptcy of the Century Motor Vehicle Co. and its bond fixed at \$10,000. The liabilities amount to about \$70,000 and the assets about \$40,000. The principal creditors are the stockholders, who indorsed the company's notes. Other claims are: E. C. Stearns & Co., of this city, \$921.65; Syracuse Supply Co., \$3,108.56; Aemo Steel & Malleable Iron Works, of Buffalo, N. Y., \$1,237.19; American Ball Bearing Co., of Cleveland, O., \$3,533.40; E. D. Clapp Mfg. Co., of Auburn, N. Y., \$1,462.74; Garvin Machine Co., of New York, \$1,400; Hartford Rubber Works Co., of Hartford, Conn., \$713.67; T. P. Hopewell & Co., of Newark,

N. J., \$554.99; Niles-Bemont-Pond Co., of New York, \$1,123; Potter & Johnson, of Pawtucket, R. I., \$2,503.50; J. H. Williams & Co., of Brooklyn, N. Y., \$1,692.63; and several hundred claims from \$1 to \$400. Those interested in the company are assisting in closing up its affairs and expect soon to have all the assets disposed of and a dividend declared. The property of the company will be sold by Trustee Stone at the plant in East Water street at 10 o'clock Saturday morning, April 30.

The Syracuse Raw Hide Mfg. Co., which makes gears, is now occupying the fifth floor of the new factory building of the Syracuse Casket Co. on South Clinton street. Both companies are controlled by the same men and already the former had itself cramped for room. New quarters will be sought soon, and in the fall a new factory may be put up. The tanning is now being done near Fayetteville, but this summer a tannery building 50 by 100 feet will be erected near the city line. The tanning is done entirely by chemicals. In addition to gears the company makes bushings, pinions and rawhide novelties, not only for the automobile trade but for many other lines which use such goods.

### WEATHER BAD IN BUFFALO

Buffalo, N. Y., April 18—It was estimated last fall by the trade people that in the neighborhood of 400 new cars would be sold in Buffalo this season, but it now looks as if the number is considerably underestimated, as orders have already been placed for 250 cars. There has been no sign of spring weather and 8 inches of snow fell Friday evening. While these conditions are deplored by the majority of trade people, it is a matter of rejoicing for the automobile trade people, as almost without exception the Buffalo agents are unable to get deliveries, and the climatic conditions will help them out considerably.

J. A. Cramer has opened his new garage and half of it has been rented to the Bison Motor Co., which is handling the Pope-Toledo.

The George N. Pierce Co.'s new garage, which is to be located on Main street, will cost about \$75,000.

The Star Automobile Co., 176 Ellicott street, is the latest addition to the Buffalo automobile trade. It is incorporated for \$10,000, with the following officers: Daniel R. Driscoll, president; Daniel Burgmaster, vice president; Elmer E. Chambers, secretary-treasurer. It is the intention to make a car for 1905, but no effort will be made to put a car of its own make on the market this season. It has, however, secured the western New York agency for the Cameron car and in addition to pushing the sale of this car in this section it is the intention to also run a garage.

The annual meeting of the directors of the E. R. Thomas Motor Co. took place last week and the following officers were elected for the ensuing year: President, E. R. Thomas; vice-president, E. L. Thomas; secretary-treasurer, J. M. Edsall. Cal Paxon is traveling in California in the interests of the Thomas three-cylinder car and is said to be doing a satisfactory business.

Harry Baird has severed his connection with the Lockwanna Motor Co. and is now building two 70-horsepower racing cars, one of which, when completed, it is said will be driven by Albert Champion.

## SHOW COMMITTEES MEET

### Motor Car and Parts Men Hold Session in New York To Consider the Allotments of Space

New York, April 15—A conference was held today at N. A. A. M. headquarters, at which the N. A. A. M. show committee and a special committee named at a meeting of the parts and accessories makers held last night met and discussed the representation of the latter at the shows. The conferees were M. J. Budlong, Charles Clifton, Windsor T. White and General Manager Miles, on behalf of the N. A. A. M. and D. J. Post, Veeder Manufacturing Co.; Howard T. Raymond, B. F. Goodrich Co.; Mr. Apple, Dayton Electric Co.; Fred Castle, Twentieth Century Mfg. Co., and Harry Dunn, Fisk Rubber Co., representing the makers of tires and accessories.

It was decided that it would be wise for the latter to complete their proposed organization, to incorporate and to have a standing conference committee with power to confer with the N. A. A. M. The N. A. A. M. committee agreed to recommend the use of the Madison Square garden concert hall and the extension of the balcony 8 feet and to recommend also that approximately 10,000 square feet net aside for the exhibits of the parts and accessories makers at the show, which should embrace the concert hall and enough of the balcony to make up the 10,000 square feet in all.

It was suggested by General Manager Miles that the parts and accessories makers appoint a member to represent them on the committee on space allotment. This met with approval, both sides agreeing to recommend it to their respective bodies.

The suggestion was also made that it might be well for the parts and accessories makers to withdraw from the N. A. A. M. to avoid double representation, providing the withdrawal was universal.

Today the N. A. A. M. committee on incorporation also held a meeting. The result was that the final incorporation will be concluded at a general meeting of the association to be held on May 4.

### BIG BUSINESS IN NEWARK

Newark, N. J., April 18—A third garage is to be constructed by the H. J. Koehler Sporting Goods Co., of Newark, at Montclair, N. J. This company has a Newark garage at Wilkes street and Bloomfield avenue and another at Essex street and Railroad avenue, opposite the depot, in Orange. With the Montclair garage the company's business will assume enormous proportions. At each of the three garages, in addition to the storage of cars, repairs will be made and the entire line of cars handled by the company will be shown. The Montclair garage will be modern in every way and is to be ready by June 15. Forty machines will be accommodated. The Orange garage accommodates fifty and the Newark garage is large enough for the forty cars stored, a total of 130 automobiles to be cared for daily. The Orange garage is under the management of Russell Gillman. The company handles the Rambler, Ford and Mitchell cars. A shipment of Fords is expected May 1, as is also the case with Ramblers. A Mitchell car is expected daily. The Rambler, Ford and Mitchell cars are handled for Essex, Union, Morris and Pa-

sale counties, and good business is predicted.

George Paddock, of the Auto Vehicle Co., says in regard to the outlook for the season: "There won't be one car supplied this year where four will be wanted. People have been waiting for the experimental age of the automobile to pass and now that automobiles have been demonstrated to be entirely fit, these people stand ready to buy. There is a greater demand in Newark for machines costing under \$1,000 than can be met. I have a car load of Olds coming any day now, and every one is sold. I have doubled my order for this year over last and only wish I had doubled my early order of this year. As the weather settles and we see spring, conditions are going to grow worse."

Seven styles of automobiles of the Knox pattern are handled by the Auto Shop Co., of 228 Halsey street, varying in price from \$1,200 to \$2,300. Any style of an automobile desired may be found in this line.

G. W. Condon, of 283 and 285 Halsey street, will shortly open a garage and repair station on West Fifty-eighth street, New York city.

Automobiles are not fool proof, but really give little trouble to the purchaser who uses an average amount of horse sense. Dr. Johnson secured an Oldsmobile in 1902. Mr. Cole, of the Auto Vehicle Co., says Dr. Johnson was never seen at the garage until the next season, when he made an exchange for a 1903 pattern. His only trouble had been a loosened wire from the spark plug. Dr. Johnson has ordered a 1904 and believes he will have as little trouble as with his former machines.

#### BIG SYRACUSE GARAGE

Syracuse, N. Y., April 18.—The R. M. Cornell Co.'s five-story building will probably be the headquarters of motorists during the summer season. On the ground floor is the retail salesroom for electrical and automobile supplies, on the floor above is the show room and retail salesroom, while the third and fourth floors are used for storage purposes and the fifth floor is the repair department. Each floor is 90x120 feet and the building is equipped with an elevator capable of lifting the largest automobile constructed, and there are entrances from two streets. Mr. Cornell says that trade is active and that he is disposing of about two carloads of Oldsmobiles a month. The business in accessories and supplies he says is also good.

#### CARBURETOR TEST

The Automobile Club of France has arranged a competition for carburetors, which will begin May 16 and bear upon the following two points: Mechanical power under different speeds and consumption, per kilowatt-hour under different speeds. The carburetors will be divided into the three following classes: First, those established through a special motor; second, those established to use a special fuel; and, third, those made to be used upon any kind of motor with any kind of fuel. There is an entrance fee of \$30 per carburetor and medals will be the rewards.

#### NEARLY 5,000 IN LONDON

Between February 17 and March 23 the highway clerk of London issued 297 motor car licenses and 411 for motor bicycles. Up to the last named date 2,653 cars and 1,709 motor cycles had been granted licenses in the British metropolis.

## CHICAGO TRADE IS DULL

### Backward Spring Assigned the Cause —Motor Trucks Popular With Many of the Big Houses

Chicago, April 19.—The backward spring is causing a long and universal howl down Wabash avenue and in the automobile colony at Michigan avenue and Fourteenth street. Cold weather has prevailed almost without interruption and sales have fallen far behind the record set last year at this time. The stringency of the money market or the trouble with the United States Steel Corporation are not held responsible, but just the weather. Even when the sun shines the chieftest result is dust. All this has prevented spring fever and a desire for rapid transit in motor cars. But when the winter does conclude to retreat, then, according to the dealers, the game will open up with a rush. People who have ordered cars will make demands for sudden deliveries and people who have not ordered cars will be sorry they had not done so long ago.

These conditions are not peculiar to Chicago, but are wide spread, every section being affected. This is held to be Chicago's second big year in automobiles, and the local market is more troubled by the weather conditions than is the case in New York, where automobilism is older.

Dan Canary is preparing to present to the public the best-equipped garage in the west and the building selected offers unique facilities. The old panorama building on the southeast corner of Wabash avenue and Hubbard street has been dismembered. A slender floor is being laid and by May 1 the place will be ready for the occupant by the Canary agency, which is now located in the Ludington building. Quarters will be provided for chauffeurs and waiting rooms for women, in addition to the business quarters. The chauffeurs' room will be equipped with lockers, shower baths, a library, writing tables and the like. Chauffeurs will be restricted to these quarters when off duty and will not be allowed in the offices or display rooms. The display rooms are to be handsomely decorated. Mr. Canary calculates that the changes contemplated will give him the largest garage in the west and that there will be room for nearly 200 cars, twice as many as the agency can handle now. There will be a finely-equipped repair shop, the same to be open all night from May 1 until the season closes in the fall. This will be an innovation in Chicago. The Canary agency will keep an automobile livery of seven high grade cars, Winton and Peerless, which will be at the service of the public at any hour of the day or night.

According to a Wabash avenue dealer, the advent of the automobile truck for heavy hauling is close at hand. The example set by the Schoenhofen Brewing Co. and Montgomery Ward & Co. is already being followed. Revell's heavy delivery wagons for furniture are in line, and more are to follow. It is added that now that the big firms have shown that the truck is really more profitable than horse handling the firms that do heavy work will get together and demand of the city that they be given better paved streets. Better paved streets should be followed by more motor trucks. It was reported that the Schoenhofen Brewing Co. had ordered ten more trucks, in addition to the two already in use. Inquiry at the Schoenhofen

office, however, failed to verify this. The Studebaker Automobile Co. is preparing to deliver automobile trucks to carry burdens of from 1,000 to 10,000 pounds.

It is estimated that there will be nearly three times as many charging stations for electric vehicles in Chicago this year as there were last season. The Chicago Edison Co. is equipping its electric light stations with the charging apparatus and other companies and individuals have taken up the work as well. There were not over a dozen places in the city last year where electric vehicles could charge their batteries, but for 1904 it is calculated that there will be from thirty to thirty-five.

According to W. L. Hibbard, of the Studebaker Automobile Co., the moderate-priced motor car is what will be chiefly purchased in the near future. He said last week that the high priced and high powered cars are all right and have their legitimate uses, but the medium-priced article is what a majority of the people want. In this connection the Studebaker company is pushing a car in which the number six plays a curiously important part, the weight being 1,600 pounds, the cost \$1,600 and the motors rate at 16 horsepower.

Erwin Greer, of the Greer Motor Car Co., reports a busy season. Eleven Couriers have been sold thus far, and the trade in second-hand machines has proven excellent. Four of last year's vehicles were disposed of last week and there was a market at that time for more than twice as many.

The average physician who buys an automobile buys a light one, at a light cost. A long-headed north side doctor, however, has bought one of the high power and high speed machines and says it pays in the long run, even counting in the \$125 a month for a chauffeur. The medicine man can get home to lunch and more than that, his sphere of influence is increased greatly.

The Studebaker Automobile Co. is expecting the first of its new victories by the first of June. The vehicles will be equipped with the new Edison battery, which is practically an unknown quantity in Chicago, although the Woods Motor Vehicle Co. uses the Edison in its inside-operated brougham.

"We expect that our new two-story, 171 by 30, building, at 1504 Michigan avenue, will be completed by June 15," said a member of the Automobile Exchange, which was incorporated last week. "We have the agency for the Rodgers air-cooled car and for the Michigan runabout and have a large second-hand trade. Our new building will be fitted with modern machinery and we intend to engage strongly in the repair and charging business. A spacious garage will be provided and we believe that when we are completely fitted we will have one of the best automobile stores in town."

#### FILLING CADILLAC ORDERS

The Cadillac Automobile Co., of Detroit, Mich., immediately after the disastrous fire of last Wednesday, when the major portion of the new factory was burned, as reported in the last issue of *MOTOR AGE*, explained its position in the matter of filling orders in a circular letter to agents, parts of which are as follows:

As you know, we have had a fire, a bad one, but not bad enough to put us out of business. Our engine factory and machine and power plant are in full operation. Our warehouse, 300 by 180 feet, with large quantities of material, including 2,000 engines and 200 finished model A cars, is undamaged. This warehouse will be converted



into an assembly shop within a week. A two-story factory near the plant of one of our body makers has a large force of finishers at work on bodies. We have sufficient material coming in to make nearly forty machines per day. The large main factories who supplied us with bodies, axle trees, wheels, frames, chassis and other material have been instructed to duplicate orders already filled. We have lost no tools, dies, jigs, patterns, drawings or special machinery. Our entire force of two employees are now at work. Within 30 days we will be shipping model B cars. In the meantime we can fill a limited quantity of orders for model



SEEING WASHINGTON IN AUTOMOBILES

A cars. If you cannot hold your trade until we can get machines to you, do not hesitate to save your profit by selling another machine. If you can get it, but remember that we are likely under present conditions to be able to fill your order as soon as any other concern which makes goods of our class. We can make no definite promises at this date. If you cannot wait, please cancel your unfilled orders and we will assign them to those who can. We can see no reason why we cannot resume model B shipments in a month. We cannot, of course, fill all our orders in 30 days, but we can begin. Please canvass your trade at once and let us know how many standard machines of each model you will need to fill your orders, and we will try to give you some idea of what we can do. The contract for rebuilding the injured portion of our plant has been let and work begun.

#### SCOTTISH BRAKE TRIALS

Tests were made recently, in Glasgow, Scotland, with a 10-horsepower car for the purpose of finding out the distance the car would travel after the brakes had been applied. There were seven trials, in three of which two brakes were used. In these tests the distance traveled was 13.66 yards at a speed of 15 miles; 13.88 yards at a speed of 19.6 miles and 13.55 yards at a speed of 20 miles. With only one brake applied, a distance of 14.21 yards; 10.88 yards and 17.88 yards were covered in three trials, the cars going at 20 miles an hour. In the seventh test, the vehicle, being driven at 21½ miles per hour, was stopped after a run of 10.91 yards. The road upon which the test was made was level and in good condition.

#### GASOLINE WON THE DAY

Washington, D. C., April 15.—The long pending case of Weston vs. District of Columbia has at last been decided by the Court of Appeals in favor of Weston. Frederick Dick, Weston, of the Automobile Storage & Repair Co., was convicted in the police court upon an information charging him with storing and keeping gasoline for sale, without license, and was allowed a writ of error. In another case between the same parties, recently decided, the court upheld the

validity of the particular regulation under which this conviction was had. It only remained, therefore, to consider whether the evidence in the present case was sufficient to support the conviction.

Evidence was adduced tending to show that Weston was licensed to conduct a general automobile storage and repair business at 1319 L street, northwest; that the building had been especially constructed for the purpose, and is so far as its construction was concerned, is perfectly adapted for the purpose for which it was built. It was also shown that although Weston had applied for a special license required for the storage and sale of gasoline on said premises, yet such license had been refused and he was without the special permit required by the police regulations. The court said: "The business carried on by Weston, for which he had a license, was the storage and repair of automobiles. This necessarily included the vehicles under the necessary conditions of their ordinary use. One of these conditions was that an automobile would, after being called out, used, and returned for safe keeping and attention until wanted again, with some gasoline in its tank which was suffered to remain. In our opinion, to store gasoline upon one's premises, within the meaning of the regulation, requires something more than this. For these reasons the judgment will be reversed with costs."

A dispatch was received here this week from Cleveland to the effect that Harry Owsney, of Cook & Owsney, local agents for the Winton, White, Stevens-Duryea and Orient automobile, had been selected to fill the position with the Winton Motor Carriage Co., lately occupied by Barney Oldfield. A Motor Age man saw Mr. Cook in reference to this dispatch and was informed that Mr. Owsney was now in Cleveland and that nothing definite could be said about the matter. Mr. Owsney has been more or less identified with the Winton interests for the last 4 years. He has quite a reputation as

an amateur driver and in the event that he enters the professional field he will undoubtedly make good. It is understood that he will retain his Washington interests even if he enters the racing field.

W. J. Foss, manager of the local branch of the Pope Mfg. Co., has been to Hagerstown, Md., to inspect the Pope plant there and within the week will go to Toledo to hurry up a number of Pope-Toledo shipments.

#### SEEING THE CAPITAL

Washington, the capital city of the nation, stands today one of the handsomest and most interesting cities in the world. Its broad and beautiful vistas, magnificent public buildings and many points of historic interest make it the mecca of sightseers. In view of this fact, and for the purpose of facilitating sightseeing, two companies have been organized to cater to the needs of the thousands who weekly visit Washington. They have established automobile trips to all the points of interest, which afford an ideal way of seeing the city of magnificent distances. A more enjoyable and more thoroughly satisfactory way of seeing the capital city cannot be imagined. The Auto-Transit Co. is operating an electric coach made by the Electric Vehicle Co. and the National Coach & Observation Co. operates a Fischer bus. Each makes three trips of 50 miles a day and usually is well patronized.

#### ELLECTION IN MAINE

Porty members of the Maine Automobile Club, of Portland, Me., met at the annual meeting, held April 13 in Portland. The following officers were elected for the current year: President, Henry M. Jones; vice president, Henry R. Stickney; treasurer, George E. Sawyer; secretary, Howard Winslow; executive committee, H. A. Harmon, M. D. Hanson, C. H. Simonds and P. C. Kilborn; membership committee, F. A. Chaplin, T. M. Spear, Jr., and L. C. Gibson; finance committee, Colonel F. N. Dow, T. J. Foster and C. H. Simonds; auditing committee, S. S. Bayden, A. E. Poole and F. N. Smith; run committee, M. D. Hanson, C. H. Simonds and H. A. Harmon. During the past season fifty-three new active members were admitted and 199 associate members.

#### RECENT INCORPORATIONS

Chicago—The Automobile Exchange, capital, \$5,000. To manufacture and deal in automobiles and other vehicles. Incorporators, J. H. Holmes, M. Holmes, Otto B. Schmid and R. Schmid.

Chicago—Pullman Autocar Co., capital, \$15,000. To manufacture automobiles. Incorporators, J. S. Meckling, A. O. Erickson and P. H. Keenan.

New York—The Colonial Automobile Co., capital, \$5,000. Directors, J. Dukes Worcester, L. Reed Fuller, C. C. White.

#### BADGERS ORGANIZE

Automobilists of Racine, Wis., met last week and organized an automobile club. T. M. Kearney was elected president, H. G. Mitchell vice president and P. J. Miller secretary and treasurer. The selection of a suitable name for the club and by-laws will be made by a committee formed of H. J. Rogers, William M. Lewis, T. M. Kearney and P. J. Miller. There were eighteen motorists present at the meeting.

# METROPOLITAN GARAGE GOSSIP

The White Sewing Machine Co. has established a branch in the Oranges in charge of Benjamin F. Adams. It is located at 19 Railroad place, Brick church.

☞

The Cadillac Co., of New York, has received a telegram from William Metzger, saying that the fire will not delay shipments to the New York agency more than 30 days.

☞

Horace B. Day, local agent for the Queen, recently climbed Eagle Rock in one of the two-cylinder 10 horsepower touring cars of this make, and carrying, besides himself, five other passengers, the total weight being 1,020 pounds. The climb was made in less than 7 minutes.

☞

M. L. Downs, who was official weigher and superintendent of transportation in the Pittsburgh endurance run, has been added to the selling staff of the Brooklyn Automobile Co., agent for the Haynes cars in the metropolitan district. Recent prominent purchasers of these cars are C. H. Evans, Hudson, N. Y., the brewer, and Albert E. Tracy, of Chatham, N. Y., a well known stock breeder.

☞

Woolston & Brew are beginning to make deliveries of the Thomas three-cylinder touring cars. Prominent among recent buyers of them are Charles R. Otis and Percy S. Palmer. Prompt deliveries of Stevens-Duryen runabouts, whose agency the firm also has, are being made. Franklin W. Hopkins, of Hopkins & Hopkins, is a recent purchaser. Both the makes were among the entries at the Boston hill climb.

☞

A new company made up of the head men in the Worthington Automobile Co., has purchased all the rights and property of the Berg Automobile Co. The business will continue to be conducted as the Berg Automobile Co. The 24-horsepower car will be sold as the Berg, with the Reiner Co. as selling agent. The Worthington Automobile Co., 547 Fifth avenue, will sell the 18-horsepower Berg under the name of the Meteor. The headquarters of the new company will be at the latter address. The company is now erecting a garage at 141 to 151 West Forty-ninth street, running through

to Fifth street, at a cost of \$450,000. The officers of the Worthington Automobile Co. are Charles C. Worthington, president; W. J. P. Moore, vice president and general manager; H. Rossiter Worthington, secretary and treasurer.

☞

Hollander & Tugemann sold six Fints last week, four of 24-30 horsepower, and two of 16-20 horsepower. Prominent among the buyers of them were Clifford V. Brokaw, of New York; George W. C. Drexel, of Philadelphia, and Dr. C. T. Parker, of Boston. Several shipments of 1904 models are expected shortly. Among these will be two 60-horsepower racers to be driven by Fogelin and Lancia, both drivers in the international cup race. One of these was entered for the hill climb at Boston on Tuesday, but it will not arrive before May 5, as the attention of the Turin factory has been engrossed touring out the trio of international cup cars.

☞

Manager Davis, of the Knox Automobile Co.'s agency, says that following the success of the three Knox wagons in the service test, four merchants visited the garage and made inquiries with a view to purchase. The Adams Express Co.'s New York branch has now had a Knox in its daily service for three weeks. To give adequate carrying capacity it is fitted with a body back of the driver's seat, measuring 8 by 4 feet. Two single-cylinder Knox tonneaus, carrying five or six passengers, are now running between Westchester and Chason Point inn. They make fifteen round trips a day, covering 60 miles each. The cost has been 1.43 cents per mile so far.

☞

It is expected that the Pope Mfg. Co.'s general sales headquarters and garage, which is to be erected at the corner of Broadway and Fifty-fifth street, will be completed early in the autumn. The showroom will have a two-story frontage of plate glass for 78 feet on Broadway. The building will be four stories high. The first floor will be taken up with a salesroom and the office. On the second floor will be a ladies' waiting room, while on the third floor will be quarters for chauffeurs. The top floor will be equipped as a repair shop,

with skylights, pits for the machines and ball-bearing turntables for quick handling of automobiles. Every modern improvement will be incorporated with a view of making it the handsomest automobile home in the country. No machines will enter on the Broadway side, there being an entrance on Fifty-fifth street for that purpose.

☞

The Daimler Mfg. Co., of Steiway, L. I., which has had for several months a sales headquarters on East Twenty-seventh street, near Madison Square garden, will shortly move into a larger garage. The company is now devoting its chief attention to pleasure vehicles. They are of 30 horsepower, four-cylinder Mercedes type, made from drawings furnished by the German factory. An original feature, though, is a semi-flexible frame, which C. M. Bouggy, the sales manager of the company, claims does away with the danger of twisting the crank and gear boxes. It consists of a rigid inner frame, which carries the engine and transmission gear, except the differential. An outer frame carries the differential and body. All inequality in the road is absorbed in the flexible outer frame.

☞

The alteration of the five-story building at 1 West Thirty-fourth street, opposite the Waldorf-Astoria, into a garage for the use of the Americain de Dietrich Motor Car Co., American agent for de Dietrich & Co., of Paris and Laueville, France, has been completed. It has a rear wing extending through to Thirty-fifth street, which will be used as a repair shop. The company has a capital of \$100,000, said to be American backing. R. E. Jarrige, who promoted the company, is treasurer and general manager, Albert Lemaire is president and consulting engineer. Several limousines, landaulets and King of the Belgians tonneaus of 20 and 30 horsepower are ready for delivery though the company will also import 40 and 80 horsepower cars. Baron F. Turkheim has gone to St. Louis to take charge of the de Dietrich exhibit. Manager Jarrige says that Gabriel will come over after the international cup race to drive a 120 horsepower car in the Vanderbilt contest.



THE BURNING OF THE CADILLAC FACTORY AT DETROIT, MICH. LAST WEEK

# MOTOR BICYCLES UNDER DISCUSSION

Interest is growing in the weekly discussions of the Chicago Motor Cycle Club, and as a result the club is gaining recruits. A short time ago Mr. Levedahl, president of the Aurora Automatic Machinery Co., addressed the club. Later on there was a discussion on organizing to establish stations in cycle shops all over the touring district in and about Chicago, so that there will be centers for catching up or controls.

Mr. Levedahl had left Aurora, Ill., during an afternoon, making the run to Chicago in 3 hours over very heavy and muddy roads. He used a regular Thor-parts motor cycle. The first 11 miles were ridden in three-quarters of an hour. The roads then began to get muddy. After riding about 15 miles the engine began to miss. He put in another plug, but this did not cure the trouble. He later on examined the carburetor and found what had happened to him only once before in a long motor cycle experience all over this country. The mud had gathered on the carburetor and held down the priming pin so the engine got too much gasoline. This may occur to any carburetor having a priming pin.

Arriving at Lyons—about 12 miles from Chicago—he stopped again and found the gasoline tank empty. The priming pin had allowed the gasoline to run out. Securing another supply he started again and then his tire punctured. The road was rough and Mr. Levedahl, weighing over 200 pounds, the pedals gave out. His method of riding is to stand on the pedals.

Mr. Levedahl led with a discussion of carburetors. He had had little experience with any other than the Thor, although he had ridden other machines. It was his opinion that unless one was an expert, the carburetor would better be left alone, for it often did not need the adjusting that the novice usually imagined. The novice turns to the carburetor when he finds anything wrong. The cause usually is with the electrical system. Mr. Levedahl said when he first got a machine he was advised repeatedly not to touch the carburetor. He could not quite believe this at first, but he later found it was true and that the troubles were elsewhere.

Mr. Levedahl gave it as his opinion that any motor cycle that a respectable dealer would handle to-day was all right. Some machines may, of course, do more than others, but the trouble that comes should not be laid to the machines. He thought that very often the rider was to blame—in fact, mostly so. A cylinder would never cut if it were even reasonably oiled—a piston could even run fairly dry without injury; but before it could reach the state that would seriously damage it, it would stick up many times. Thus the operation of expansion would save the careless operator from damaging his machine. It is, therefore, automatically fool-proof; and many times when the piston sticks, the rider ought to congratulate himself. But cylinders do cut, and this is evidence that great abuse has been done so the



machine at some time by the owner or others. Mr. Levedahl exhibited a cylinder that had been cast in the usual mould of the Thor and dwelt upon the construction and difficulties. He said to produce a good gray-iron casting, free from defect, was not an easy thing. In fact, of all cylinders cast only about 40 per cent were good and the rest had to be thrown out. The fault was with the foundrymen. In the years leading up to the present, common gray-iron castings were not made to perform the fine functions of a gasoline motor, where the inside had to be polished and be so perfectly air tight; and therefore the art had not reached a point where success was easy. A cast iron cylinder is a perfectly satisfactory article when cast right. A great deal, however, depends upon the kind of iron used.

As to radiation, Mr. Levedahl said a surface coated with black lead would radiate 50 per cent more heat than a bright surface. His cylinders were made 1½-horsepower, but in the brake test they developed 2. Sometimes they developed 2½ and up to 2½. But the engine is designed to stand 1½, and it will run indefinitely under that load. For a while it will stand for 2-horsepower and a little over, but after a time it might heat. This accounts for cases where riders complain of engines slowing down after running a few hours. It is not supposed an engine calculated for a certain load can be worked above that load for an extended period without showing the effect. But this effect even then is not serious—it would simply overheat and slow down, and with the slowing would gradually cool and return to its normal work. Poor handling of the gas and compression could also cause this—over gassed and over compressed for work requiring less power. All this the skilled driver soon learns, and when he does he finds his engine always ready and always working.

As to expansion from over heating, Mr. Levedahl found one engine in California where the cylinder had expanded slightly oval, thus decreasing the compression, with loss of power. This cylinder had not, of course, been annealed. A cylinder that has been annealed will not thus expand. The front of an engine gets more air than the rear and has been carefully noted for effect. He had noticed on a steel cylinder—which shows effect of overheating quicker than iron—the inside showed a blue mark following and immediately behind the rods clamping the cylinder to the crank case. As to the position of the engine in the frame, it had been argued that when placed in front, with the head inclined forward, it would get the air first and freely. But Mr. Levedahl said that, when in the middle of the frame and as part of the frame taking the place of the seat mast, it got plenty of air, as nothing is in front of it. But there were engines mounted behind the mast and behind the spark coil, that possibly might feel the effect of this being shielded from the direct air current. An engine should

be so placed that the air can get all around the ribs. He had found out also that by boring holes through the ribs, the radiation was considerably increased. This is somewhat of a paradox, for thereby the surface is burned, but practice had demonstrated this to be fact.

As to the efficiency of iron ribs against copper, he agreed that copper was a better metal for throwing off heat. That is, it would draw heat away from iron, but it was a better retainer of heat than iron. Weight for weight, the copper would draw heat away from iron and then keep it; but if the copper ribs were much lighter, thus making more radiating surface, it might be that they would be efficacious in cooling the cylinder. But it must be remembered that copper is used for soldering for the reason that it holds heat so long.

Overheating of an engine also caused another and common cause of stopping or misfiring, is that the spring holding the inlet valve would lose its tension. This spring has to operate with wonderful quickness and it therefore has to be up to its maximum tension to perform its function well. There had been some thought given to this subject and the putting of the inlet spring outside the dome was seriously considered. Ribbing the dome as it now is constructed would not accomplish the result.

This brought the question as to which was preferable—the automatic or the mechanically operated intake? Mr. Levedahl thought the automatic right according to present practice as applied to the Thor engine. Many pointers had been gotten from the old country and a representative over there reported that the mechanically operated intake had been abandoned on some motor cycle engines.

As to spark plugs, Mr. Levedahl thought they are all pretty much alike in general practice. He was experimenting on a new plug that was constructed with particular reference to the extreme expansion and contraction, and so far it was a decided improvement. A sample plug was exhibited showing how the porcelain was held rigidly tight under all conditions, and breakage of the porcelain reduced fully 90 per cent.

Jerking of the machine under low speed was referred to, and to overcome it throttling was recommended, using the new handlebar throttle; and the retarding of the spark so that compression would be low. Skill in operation could overcome all this jerking.

Piston rings would get in line according to Captain Koeppe's experience, but Mr. Levedahl's experience was that it seemed to make no difference.

Pressure in the cylinder, Mr. Levedahl said, was theoretically about 105 pounds at the highest compression point, but leakage in the valves really brought this down to 90 pounds in practical operation.

The club has already adopted a neat uniform and when out on runs the members are to always wear this. The first run of the season was held last Sunday.



# Motor Car Family Trees

Fig 5 -  
The Thomas's



Model 18—1903

The Flyer 1904

Motoretto 1901

Model 17 1902

Model 7 1902

The Thomasine 1901

Auto-Quad 1901

Auto Tri 1901

# THE PEERLESS CUP RACER



WYOM. ALE

LOUIS P. MOORE ON THE NEW PEERLESS RACER

Cleveland, O., April 19—The racing car built by the Peerless Motor Car Co., of Cleveland, O., to compete in the American trials for the Gordon Bennett international cup race bears a close resemblance to the racer of last year after it had been remodeled for the winter speed trials on the Ormond bench. However, the new car is considerably lighter and is less powerful than the old. Louis P. Moore, who designed the car, is unwilling to state the exact horsepower of the new machine or to give the dimensions of the cylinders, but it is understood on good authority that the car will develop between 40 and 50 horsepower; whereas the older car is supposed to have been of 80 horsepower.

The new car hangs considerably lower than the old and slopes down in front, this being caused largely by the fact that it has 34-inch wheels with 3½-inch tires in front, and 30-inch wheels with 4½-inch tires in the rear. The wheel base is 8 feet 8 inches, and the tread 4 feet 6 inches. The main frame is of pressed steel, 5 inches wide at the widest point. The mechanism rests on a sub-frame, which is also of pressed steel and which extends from the front to about the center of the car, being supported by arched trusses.

The four cylinders are cast in pairs, as in the standard 35-horsepower touring car. The spark plugs are in the center of the heads. But one carburetor is used, and the mixture is slightly heated by warmth taken through a tube leading from the exhaust pipe. The mixture and spark advance are controlled by levers on the steering wheel, the connecting rods passing through the steering mast. There are four mechanical speeds forward and a reverse drive.

A directly geared pump provides the water circulation and radiation is effected through sixteen 5-16-inch copper tubes which extend from the front of the car to points even with the water tank back of the seat. No flanges are used on the radiation tubes. The remodeled car last year had this system of radiation but there

were numerous flanges to increase the surface. It has been found that back of each flange there was a dead spot which held the heat, and it is believed that the bare tubes, affording a clear sweep of the air, will furnish better radiation than the other system. Mr. Moore had the car out on the road several days last week and he expressed himself as more than pleased with its showing. It will be finished in red, like last year's car.

## STANDARD TOURING CAR

The four-cylinder touring car made by the Standard Motor Construction Co., of Jersey City, N. J., is chiefly characterized by its marine pattern of upright motor. This engine is similar to that placed on the racing boat Standard last summer, although it has only four cylinders, instead of six, and is not provided with the self starting and reversing means of the boat motor, which consisted of a compressed air tank and a shifting cam shaft.

The cylinders, which are of 4-inch bore by 5½-inch stroke, are cast in pairs, and the two pairs are bolted together so as to form, in appearance, single casting. The cylinders are mounted upon light stanchions or posts, the lower ends of which are attached to the skeleton frame supporting the crank shaft bear-

ings, and the motor thus has the general appearance of a marine steam engine. The frame is stiffened by cross braces. A vertical governor shaft at the forward end of the motor is driven from the crank shaft through helical gears, and the horizontal cam shaft at the aft-end side of the cylinders is operated from this vertical shaft through another pair of helical gears. On this cam shaft are mounted all the cams for operating the inlet valves, exhaust valves and the make-and-break igniter. The crank shaft has three bearings, one at each end and one in the center. The cylinder heads are cast integral with the cylinders. Access may be had to any of the valves by simply removing two nuts. The current for the make-and-break ignition is furnished by a Standard magneto, which is operated from the crank shaft by a pair of spiral gears. The engine is said to develop 25 horsepower at 1,000 revolutions per minute.

The carburetor, which is of the float feed style, has a peculiar arrangement of regulation to suit varying engine speed. There is only one air inlet, but the opening around the spraying nozzle is increased and decreased in size according to the pressure of the air, this being accomplished by a spring-actuated trap door resting over the nozzle. When there is no suction this door nearly rests on the nozzle, but the suction lifts it against the force of the spring, thus enlarging the opening, and the greater the rush of air the wider the opening. The spring tension is adjustable, which affords means of adjusting the mixture.

The two mechanically operated inlet valves in each pair of cylinders are connected by a port common to both, and a main pipe branching into a Y connects with a port in each of the two cylinder castings. The ball governor on the vertical shaft acts on the throttle of the vaporizer to regulate the speed of the engine. The exhaust ports connect by manifold with easy curves to a single pipe, which leads to a cylindrical muffler placed in the rear.



WYOM. ALE

SHOWING THE PEERLESS MOTOR



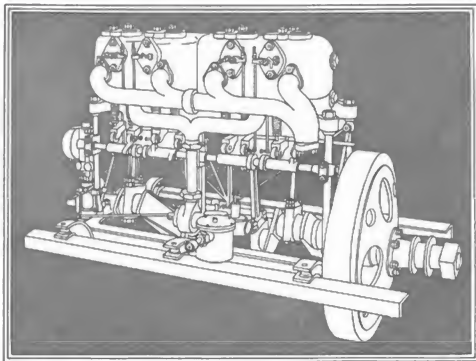
The friction clutch is of the conical type, the cone being an aluminum casting faced with leather. The connection between the clutch and the sliding gear is made by a joint which allows free longitudinal and lateral motions. The speed change gear is of the sliding gear style, giving three forward speeds and a reverse and direct drive on the high gear. It is contained in an aluminum case with hand hole in the top. The gear is interlocked with the friction clutch by means of a pin dropping into holes in the shifting rod, so it is impossible to operate the clutch until the gears are in perfect mesh. A pair of spring shoes fastened to the under frame serve to retard the clutch when it is thrown out.

To the final drive shaft outside the gear case is keyed a brake drum, which is gripped by a leather faced steel band. This drum also serves as one of the yokes of the universal joint of the propeller shaft. The universal joint is used only at the forward end of the propeller shaft, and a rocking sliding joint at the rear end, the connected shafts being in a substantially straight line when the car is normally loaded, the engine being tilted or "canted," as is usual in boat construction, to bring the crank shaft in line with the bevel pinion shaft.

The cardan joint is of a style in which there are no pins. The cross enters the sockets loosely and is then bushed by hardened steel cup bushings, which are screwed into the yokes and locked, the yoke being undercut inside. When the bushings are in place a pocket is formed at the end which contains enough oil to lubricate the bearings for a long time. The rear axle is a typical bevel gear construction, the bevel gear being secured to the differential gear on the rear axle and the whole enclosed in a casing on the axle.

The cooling water is circulated by a gear pump, which is directly connected to a downward extension of the vertical governor shaft. A Mercedes style cellular radiator with hexagonal tubes is used, and air is forced through this radiator by a fan mounted on ball bearings and driven by a helical spring running over grooved pulleys. This device is said not to be affected by moisture and to retain the same tension constantly.

Oiling is accomplished by a belt driven oiler mounted upon the dash. This oiler comprises a long rocking beam, having attached at each



MOTOR AGE

THE STANDARD MOTOR

end a row of cups which dip into the tank and are then slowly raised until the beam is nearly vertical; the cups then spill their contents into a set of hoppers, which are piped to the different parts requiring lubrication, the cups on one end of the beam emptying into a different set of hoppers than those on the other end. The oiler is operated by two sets of worm wheels, giving a double reduction, so that the complete cycle of operations is only repeated about once a minute. The capacity of the cup is, of course, very small.

Plain bearings are used throughout, except on the fan shaft and the thrust bearing for the clutch. The front axle is  $1\frac{1}{2}$  inches square. The wheels are of wood and are shod with 34 by 4-inch Goodyear tires. The springs are all semi-elliptic; the front ones having five leaves and being 40 inches long by  $1\frac{3}{4}$  inches wide, while the rear ones have seven leaves and are 42 inches long and  $1\frac{3}{4}$  inches wide. The running gear frame is of pressed steel, with a center section of  $4\frac{1}{2}$  by  $1\frac{1}{2}$  inches by 3-16-inch thick, tapering at the ends. A sheet metal

partition is placed a couple of inches behind the fan, which prevents the hot, dusty air from being discharged into the engine space. A sheet metal apron completely encloses the under part of the chassis, extending from this partition back to the rear of the gear case. This, it is claimed, will keep out all dust and mud, and obviate the necessity of using a covering over the running parts of the engine.

The brakes are of the external band type with shoes, one being foot operated and the other hand operated. Steering is by a 15-inch hand wheel, which has an ignition contact push button inlaid into the under side of the rim. The steering gear is a worm and sector. The controlling devices comprise two foot levers and two side hand levers, besides the spark and throttle control on the steering post. The body is of the Roi des Belges style and is upholstered in black leather.

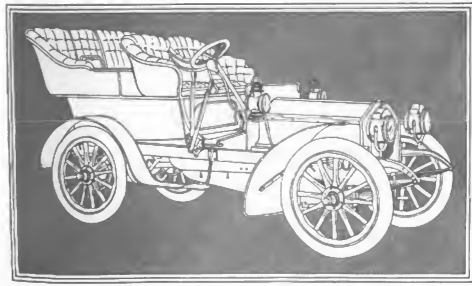
#### NEW BOOKLETS

The advantages and disadvantages of kerosene as burner fuel for steam vehicle boilers, the properties, good and bad, of different forms of kerosene burner construction and the principle and operation of the Lightning burner are treated exhaustively in a Burner Book issued by the E. C. Walker Co., of New Albany, Ind.

Tips on carburation and the operation of motors are an interesting part of the booklet describing the Gould carburetor, manufactured by the Gould Mfg. Co., of Trenton, N. J.

Oils Which Do Not Drip is the subject of a treatise on the non-fluid oils manufactured by the New York & New Jersey Lubricant Co., 14 Church street, New York. These oils are especially recommended for engine and crank shaft bearings, differential and transmission gears, driving chains, and ball and roller bearings of automobiles.

All sorts of storage batteries, from small ignition cells to forty-cell automobile batteries, are described in the new catalogue of the Northwestern Storage Battery Co., of Chicago, which makes a great variety of accumulators of the Faure type.



MOTOR AGE

THE STANDARD TOURING CAR



# FAST CRAFT AT MONTE CARLO



**M**ONTE CARLO, MONACO, April 12.—Trefle-a-Quatre—62.4 miles or 100 kilometers in 2 hours 37 minutes 71.5 seconds, at the rate of 2 minutes 31 seconds per mile or 23.8 miles an hour.

One hundred and twenty-five miles or 200 kilometers in 5 hours 16 minutes 51 3/5 seconds, at the rate of 2 minutes 32 seconds per mile or 23 1/2 miles per hour.

This is the wonderful speed performance of the new racing craft, Trefle-a-Quatre, which made its debut in the water racing game last Wednesday.

Never before at any motor boat race did a craft show such surprising superiority of speed, and never before was the enthusiasm so great and the oration given its owner and its master so tumultuous. The reason is, first, because very little was known about this French-built motor boat and almost everybody expected to see the famous foreign-made boats make a clean sweep of everything. Neither the fast Mercedes belonging to C. L. Charley, nor the new one belonging to Jellinek Mercedes, nor the Lutecce and the two English Napier's were a match for Georges Richard-Braiser's 80-horsepower flyer. Once in the water, it simply ran away from the others and could not be overhauled.

There were many races for all kinds of racing boats and cruisers, but after the second day's events, when the new French craft was started for the first time, the general interest was concentrated upon it, and the several thousand enthusiastic followers of the sport did not care much about any of the races except those in which the newcomer figured.

The first day's events were for racers and cruisers, the former having to cover a distance of about 94 miles, the latter only a little over 37 miles. The racers were not to measure over 31 feet. The maximum length of the cruiser was 25 feet. Seven racers and six cruisers started, but the race for the former was soon reduced to a match between Princess Elisabeth and Raape III. After being close together for several hours the latter managed to gain a lead, finally winning by almost 25 minutes, her time for the 94 miles being 4 hours 33 minutes 22 1/2 seconds. The race between the smaller boats was more exciting and Marguerite only won the cruiser's event by 3/4 of a second.

The fast racers made their first appearance at the meeting on the second day in the race

reserved to those measuring between 31 and 47 feet. The distance of the race

was 200 kilometers—125 miles. There were only four starters, but, as at Nice, the quality of the few made up for the lack of quantity. Two German boats, Mercedes and Mercedes II; the English racer, Napier-Minor, and the French defender, Trefle-a-Quatre, were the competitors. One may imagine how the onlookers felt. As it was a decided cosmopolitan crowd, the discussions about the merits of the boats and the probable outcome of the race were lively.

The time allowance was 10 hours and hardly 5 had elapsed when the, until then, unknown French racer completed the course, almost 3 miles ahead of Mercedes, completing the 125 miles in 5 hours 15 minutes and 51 3/5 seconds. It was during this race that the 100 kilometers were covered in 2 hours 37 minutes 71.5 seconds, the fastest time ever recorded for such a boat.

The cruiser's race was quite uninteresting and Pengoot III proved the fastest among the ten boats which started.

The third day's program was reserved for racers from 47 to 71 feet in length. It was not exciting and the time of the winner, Kotchev, which covered the 77 1/2 miles in 6 hours 33 minutes 26 seconds, was considered fair owing to the rough sea. The event for steam motor boats could not be run off, owing to the Gardner-Serpellet entry being withdrawn at the last moment. A race for motor-propelled fishing boats was won by Dalifol I, covering the 40 miles in 5 hours 58 minutes 14 seconds.

Friday should be long remembered by those who followed the tournament, owing to the spectacular blaze which occurred on board Parisienne II. This racer had trouble during the race of the previous day, but this time it was put out of service. It belongs to the class of large racers measuring 71 feet, and has three 60-horsepower Mors motors. At the time of the fire, which is said to have resulted from the bursting of a pipe, there were about 800 liters of gasoline on board. An explosion was expected every minute, but, thanks to the presence of mind of those on board, nothing really serious happened. Four of the crew jumped overboard when a relief ship was within a few feet. They had put on their saving apparatus and were but slightly burned.

This race, in which several of the best boats had started, was called off, and a new start was made, this time the distance being reduced to fourteen laps instead of twenty. Napier I, Dubonnet, Lutecce, Femina and Plouit IV started in the racer division of the race, which soon became a match between Lutecce and Dubonnet, Napier suffering an accident after having covered 30 miles. Lutecce won, covering the 105 miles in 5:06:09, over half an hour faster than the second.

The cruiser division was run over a distance of 100 kilometers and was won by Vas-Y in 4:25:18 1/4. The other starters were France, Usona II, an American-built racer, and Suzy.

The first defeat of the so far unbeaten Brazil craft came in the handicap race Saturday. For some reason the boat was unable to develop the speed it showed at the preceding races and this gave the German-made craft their first chance of making a good showing. Charley's Mercedes I won with a big lead from Lutecce, Dubonnet, Princess Elisabeth and Raape III. Again did the event for cruisers prove uninteresting, although there were many starters.

The usual French crowd gathered along the shore on Sunday when the 100 kilometers handicap was run. It was a brilliant race, although the weather was very disagreeable. Trefle-a-Quatre was scratch and lost, but not until a real battle of giants had been fought and the giant French craft again had proven very conclusively that it is the fastest motor boat in European waters and probably in the world. Princess Elisabeth was the winner, the one which ought to feel highly flattered, although she won by only 25 seconds from a handicap of over that many minutes. Dubonnet, Raape III, Mercedes and Lutecce were the other contestants.

The mile and kilometer races were merged on Monday, the time for the latter distance being taken during the mile race. Trefle-a-Quatre won her heat very easily from Mercedes I, and so did Raape. Lutecce had a walkover in the third heat. The three winning boats met in the final, which resulted in another splendid victory for the French boat. It was such an easy affair for her that it was a pity to see the other two trying to lessen the distance which would eventually separate them from the water monster.

Today, the last of the tournament, a handicap was run over a distance of about 7 1/2 miles. It was a tame race after the fine events of yesterday. None of the faster boats took part in it and Titan II won from Princess Elisabeth, with Napier Minor a good third.

The motor boat exhibition is probably the greatest that was ever held. Sixty-one boats, from the small fishing craft to the monster racer, are shown, and truly international is this show, because there are boats from Germany, Italy, America, Switzerland, Belgium, Austria, England and France. It is as cosmopolitan as the salon du Grand Palais.

Prince Albert I of Monaco opened the exhibition and several hundred invited guests from the army, navy, nobility and the industries and numerous foreign visitors attended in addition to the general public.

Many of the boats were closely examined

by the connoisseurs. The 47-foot Gardner-Serpollet steam racer, for which 100 horsepower is claimed; Rapée II and III, each measuring 31 feet, the former having a 24-horsepower and the latter a 35-horsepower Fawcett motor; the 180-horsepower Parisienne II; Trefle-a-Quatre, a four-cylinder 80-horsepower Georges Richard-Brazier craft; the 70-horsepower Lutée; the two 80-horsepower Napier; the two 90-horsepower Mercedes racers; the three American boats, New York, Newport and Union II, were those which seemed to interest the visitors mostly.

That this meeting was a grand success was commonly acknowledged. It has probably done more to interest people in motor boats than all the contests which took place last year. Just as after the Paris-Berlin and Paris-Vienna automobile races, the manufacturers claim that the effect of the week's races will be very beneficial to trade. "We needed such an event, to keep people reading and thinking about motor boats for a long time. A day's tournament is too quickly forgotten, while a week of races is bound to create a lasting interest," said a Paris manufacturer.

The topic most discussed was the marvelous performance of Trefle-a-Quatre and ever before was a maker subject to so much hand-clapping and expressions of further success as the builder of the craft. Other boats were given due credit, too, and for regularity of running the two Mercedes boats were accorded the most general praise.

#### CENTRAL NEW YORK RACES

Syracuse, N. Y., April 18—The Inter-lake Yacht Racing Association has decided to have classes this summer for power boats in the annual regatta to make interest more general. The races will be held during the 2 weeks between August 8 and 22 on Cayuga lake at Kidder's Ferry and at Union Springs.

It is estimated that there are more than 200 power boats owned in and about Syracuse and central New York and this year the association is planning to attract the owners of as many as possible to the regatta. In addition to the class races for power boats two match contests have been arranged. One of these will be between the 80-foot steam yachts Augusta and Clara, owned respectively by Charles Kolog, of Ithaca, and Henry Westinghouse, of New York, who has a summer residence at Sheldrake on Cayuga lake. The second match race will be between smaller craft, and results from a match race last year between the same motor boats, Firedy, owned by J. E. McIntosh, of Auburn, and Mnh, owned by Hiram Haskins, of Ithaca. The Haskins boat won last year.

#### PROTEST GROSVENOR BILL

Washington, D. C., April 18—That the public is alive to the manifest injustice of the Grosvenor bill, providing for certain requirements for vessels propelled by gas, fluid, ammonia, or electric motors, is evident from the large number of petitions and letters protesting against the enactment of this bill which have been received by the house committee on the merchant marine and fisheries, of which committee Representative Grosvenor is chairman.

Supplementing the public bearing on the bill before the committee, when a large number of motor boat manufacturers and others gave their reasons why this bill should not be passed, as reported in MOTOR AGE at the

time, boat owners in all sections of the country have sent to the committee the strongest protests against the bill. Among these protests is one from the Chicago Yacht Club, which, at one of its meetings, requested Judge-Advocate Hacker to write, in the name of the club and in the name of the amateur yachtsmen of Chicago, protesting against the pending measure.

Among the numerous petitions and memorials filed with the committee may be mentioned the following: The Buffalo Launch Club, Buffalo, N. Y., enters an emphatic protest against the Grosvenor bill.

J. P. Turner & Co., New Smyrna, Fla., protests in the very strongest terms possible against the passage of the bill. They say: "If necessary, we could forward a protest from 500 launch owners from the state of Florida, and unquestionably every other state would furnish the same proportion of protests. Such a law as proposed would put at least four-fifths of the launches on this coast out of business."

T. T. Wells, a prominent New York attorney, says: "It seems to me that such a bill is utterly indefensible and unnecessary."

J. R. Aleock, of Chicago, says: "To subject boat owners to such unnecessary annoyance, it seems to me, would not compensate anyone or be of any benefit to a city; on the other hand, it would have a tendency to remove from our city one of the instruments designed to beautify Chicago and its surroundings. We have too many means of taxing property owners and people who are an actual benefit to Chicago."

The Eastern Yacht Club, Boston, says: "In our opinion, the law as it stands is sufficient protection for the public, and if this bill passes it will inevitably injure, and in many cases ruin, the business of a very large number of persons, without compensating advantages to the public."

Ten citizens of Worcester county, Maryland, protest against the bill on the ground that it "destroys the purpose and end for which the power boat was built and for which it is so wisely adapted."

The North Side Board of Trade of New York City forwards a resolution adopted to the effect that "the provisions of this bill are deemed unreasonable and prejudicial to the

use of small pleasure craft, and that this board enters a most emphatic protest against the measure."

One hundred citizens of New London, Conn., earnestly protest against the bill.

Fifty citizens of Five Islands, Me., have asked their representative in congress to oppose the measure, saying: "This law, if passed, cannot help from being a great discouragement to all concerned in the manufacture of motors, boat builders, and parties using motor boats."

Ex-Vice President Levi P. Morton and Whitelaw Reid, the well-known editor, sent strong protests against the passage of the bill.

The above quotations are taken at random from the immense correspondence on the subject sent to the committee and indicate very plainly the feeling against the bill. Protests continue to be received, but it is impossible to tell the fate of the bill.

#### IT'S THE TADPOLE DITCH

Chicago, April 19—It seems impossible to rid people of the idea that the waterway to St. Louis includes the drainage canal. This is an error. Parties going southwest from Chicago by water must continue to use the Illinois and Michigan canal, as they did before the drainage canal was ever thought of, or else pay for a lot of portage at Lockport. The Illinois and Michigan canal, about which so much has been printed in the daily papers of late, runs alongside the drainage canal, it is true, and there is plenty of water in the latter. But at Lockport the traveler who has come down by the drainage canal, along with the microbes that have made Chicago famous in St. Louis, must have his boat carried 1,000 feet or so over to the old tadpole ditch. And there will be just 67 miles of the tadpole ditch before La Salle is reached, and the Illinois river entered.

Charles P. Root, of the Truscott Boat Mfg. Co., has just gotten out charts of the Illinois and Michigan canal from Chicago to La Salle and of the Illinois river from La Salle to the Mississippi. The charts consist of a carefully-prepared series of blue prints giving all the islands, dams, locks, wing-dams, bridges, shoals and lights in the 345 miles from Chicago to the Eads bridge, St. Louis.



MOTOR AGE

THE MOTOR BOAT EXHIBITION AT MONTE CARLO.

## FROM THE FOUR WINDS



The Miller-Mandy Motor Car Co., Utica, N. Y., handles the Winton, Pierce, Cadillac and Autocar.

Thirty-nine automobile owners of Binghamton, N. Y., met last week and decided to form an automobile club.

Last Sunday's run of the Long Island automobile club was to Far Rockaway, L. I., by a new route, cutting out Jamaica. The day's run was 50 miles.

L. B. Garrison was elected president of the Elgin Automobile Club, Elgin, Ill., last week, and J. Thomas secretary. The club has about thirty charter members.

The town board of Lapel, a little village somewhere in Indiana—not Missouri—passed an automobile ordinance last week. There are two automobiles in the Indiana metropolis.

Several Paris theaters are now using motor wagons for carrying scenery. The gain in time has been found to be so great that most all of the larger play houses have ordered one or more such cars.

Chief Swingley, of the St. Louis, Mo., fire department, has asked an appropriation of \$1,200 with which to purchase an automobile. He intends to find out whether an automobile will be more efficient than a horse for all-around service.

A Wilmington, Del., newspaper reports that an automobile factory will probably be located in the town within a few months. Capitalists bought a large tract of land a few weeks ago and now will begin at once in the erection of the plant.

H. A. Mack, formerly manager of the Haynes-Apperson branch store in Lima, O., has opened a salesroom at 123 East Market street, Lima, and will handle both medium and high priced cars. A full line of supplies will also be handled by the new Lima dealer.

Up to date 4,800 automobile licenses have been issued at Trenton, N. J. A great many owners are exchanging their last year's runabouts for touring cars. The decrease in applications for licenses for light cars is great, being only 3 per cent, while last year it was about 80 per cent.

During February, 538 motor cars were imported into Great Britain, their value amounting to \$590,365. During the same length of time parts to the amount of \$103,180 were imported, making a total of \$693,545, which is nearly \$288,000 more than the corresponding period last year. During the same period sixty-five British cars were exported and, to-

gether with parts sold abroad, the exports amounted to \$135,336, an increase of nearly \$28,000.

The New Jersey Automobile and Motor Club, which now has 140 members, will hold its annual election May 2.

Mrs. Robert Louis Stevenson has purchased a White steamer from the San Francisco offices of the White Sewing Machine Co.

The Dayton Electrical Mfg. Co., of Dayton, O., has issued a comprehensive booklet descriptive of all of the articles in its line of electrical ignition specialties.

An automobile club has been organized in Austin, Texas. Dr. T. J. Bennett being named president, Pierre Bremond vice-president and Eugene Tips secretary-treasurer.

According to reports from local dealers the trade is very brisk at present in Portland, Me. Although the weather has not been all that could have been wished, many cars were sold within the last few weeks.

Morgan & Harding, automobile and bicycle dealers, of St. Louis, Mo., are erecting a two-story and basement brick garage. It is 83 by 150 feet and will be equipped for general repair and storage purposes.

At a meeting of the Worcester Automobile Club, Worcester, Mass., held last week, the club voted to join the state association. Percy Pierce, of Buffalo, N. Y., and Elliott H. Lee, president of the state association, addressed the members of the club.

Calvin T. Paxon, the traveling representative of the E. B. Thomas Motor Co., of Buffalo, N. Y., is now on the coast in three-day interests. His western trip includes Denver, San Francisco, Los Angeles, Portland, Seattle, St. Paul and Minneapolis.

The Maenish Automobile Co., of St. Louis, Mo., has rented for 5 years a property 50 by 155 feet, located on Olive street, and will soon start the building of a salesroom and garage. The two-story store will cost about \$20,000 and the owners expect it to be ready some time in June.

Hopkins Bros., Des Moines, Ia., have transferred their automobile and accessories business to the Fagel-Aldrich Co., at 409-411 West Ninth street. The new concern will have the agency for the Oldsmobile, Autocar and Orient hackboard, besides carrying a full line of appliances and supplies.

The Bruck Solidified Oil Co., of Boston, Mass., is introducing to automobilists a solidified oil which can be used in compression cups, on gears, chains, axles and other car bearings. The company claims that neither alkalies, acids, water nor heat are employed in the manufacture of this lubricant and that the process is simply the solidification of high vis-

cosity lubricating oils by a method which does not destroy the initial qualities of the oils. Samples will be mailed to automobilists upon application.

The Automobile Club of Germantown, Philadelphia, Penn., has purchased a lot at Carpenter and Emlen streets, where it intends to erect a \$10,000 clubhouse.

St. Paul, Minn., unlicensed motorists will please take notice that the state boiler inspector, R. H. Johnston, is after them for not having taken out the required licenses.

Denver, Col., is to have a new garage in the near future. Harry K. Brown is erecting the building on Court place and it will temporarily have only one story. Later on two more will be added.

During 1902, \$862,960 worth of automobiles and motor cycles were imported by Germany. Official reports show that there was a decided increase during 1903, the amount being \$1,218,000. Over two-thirds of the cars imported were of French manufacture.

The chief of police of Hamilton, O., has noticed that the automobile speed limit of 6 miles an hour is not being obeyed by the automobilists of that progressive little city, and he has instructed the local bobbies to corral all who fracture the law.

F. W. Vogler, president of the Redrock & Salmon River Stage Co., of Redrock, Mont., last week purchased a 24-horsepower Peerless touring car for use in Montana. The use of this car is preparatory to the substitution of automobiles for the horsedrawn stages now used in the company's system.

At a recent meeting of the electors of Nepeuskun, Wis., a resolution was adopted concerning the running of motor cars through the town. The maximum speed permitted is 12 miles per hour and in crossing a public highway and over the crest of a hill the car must be slowed down and driven not faster than 4 miles per hour.

The Springfield Automobile Mfg. & Garage Co., of Springfield, Ill., is now located in its new, especially equipped establishment, and in addition to its manufacturing operations will conduct a general repair and garage business. The company's station will be the headquarters of the St. Louis tour automobilists when they pass through the Illinois state capital.

Prominent members of the Society of Motor Manufacturers and Traders of England have started a movement in favor of holding next year's show at the Olympia instead of the Crystal Palace, the principal reason for the change being that the palace is too far from the center of the metropolis and the expense too great. The main floor of the Olympia provides for over 100,000 square feet of exhibition space and almost an equal amount is available in the galleries.

O. H. Dietrich, who was an exclusive bicycle dealer for many years in Allentown, Pa., has his new two-story building, 40 by 110 feet, completed a few weeks ago and has added a line of automobiles to his growing business. The Cadillac and Franklin will be handled by Dietrich, who had the business incorporated re-

ently under the name of O. H. Dietrich & Co. The store is located at 24-26 North Tenth street, in one of the busiest parts of the Pennsylvania town.

◆◆◆

A 23-foot, 16-20 horsepower Fiat motor boat has been sold to a well known New York yachtsman and automobilist, who will race it on the St. Lawrence this summer.

◆◆◆

The White Sewing Machine Co. has established a branch at Brick Church, Orange, N. J., for the sale and care of White steamers in the district around Orange. It is under the management of Benjamin F. Adams.

◆◆◆

A Milwaukee journal reports that for the first time in the history of Milwaukee the city council has real chaffeurs among its members. George J. Lonsdorf and Sherburn M. Becker are the automobile city fathers.

◆◆◆

The Oldsmobile has won fresh honors, this time in far away India, where, at the Mahon-Mela exposition, recently held in Calcutta, this pioneer runabout was awarded a gold medal. The medal was won in competition with both French and English makes, but, as in the British reliability trials, the Oldsmobile carried away the honors, and aided in the battle for American supremacy.

◆◆◆

At a recent meeting of the board of trustees of the Rockford Automobile Club, Rockford, Ill., the following new members were admitted into the club: Dr. S. C. Andrus, H. L. Cole, Dr. E. C. Dunn, George Woolsey, Dr. Roberts, L. G. Harrison, H. Laverne Cole and Frank Duell. It is likely that after the A. A. A. and A. M. L. have been merged the club will join the new organization.

◆◆◆

Buffalo will become quite a motor boat center. There are many boatmakers and in most every small factory motor boats are being made. The Buffalo Gasoline Motor Co. and the Lackawanna Motor Co. have sold many marine motors and individual buyers are having boats made to order. The coming summer will find hundreds of little boats being propelled by motive power in that section.

◆◆◆

The Truscott Boat Mfg. Co., of St. Joseph, Mich., shipped this week a 77-foot full-rigged motor yacht as the main feature of its exhibit at the St. Louis fair. The boat is magnificently finished in mahogany, has a bridge, all the comforts of home, and a 60-horsepower motor of the four-cylinder four-cycle pattern. Besides this boat, the company will exhibit all sizes of motor boats, motors, row boats, and canoes, making the greatest single affair of the kind ever attempted.

◆◆◆

Word comes from Providence, R. I., that the action of the American Power Boat Association in accepting the Rhode Island Yacht Club as a member will probably result in the realization of a scheme which yachtsmen have had in their minds for some time—that is, a race of power boats in Narragansett bay. Last year an attempt was made to have a race of launches before the yachting season was over, but the plan failed to materialize. Now that the club has become a member of the national association a race during the coming summer is assured, in which all members of the association will be allowed to participate. No

definite plans have yet been made, but a delegate to the association has been chosen in the person of Fred S. Nock, of East Greenwich, R. I.

◆◆◆

Indian motorists do not like the European and American idea of numbering cars and have begun a campaign against the proposed measure.

◆◆◆

The Massachusetts branch of the Good Roads Association held a meeting in Boston April 12 at which Asa Goddard, president of the Worcester Automobile Club, was elected a member of the committee.

◆◆◆

The Automobile Club of Italy, which has its headquarters at Genoa, has elected the following officers: President, Eugenio Cesare Gamba; vice president, Marquis Domenico Palavolino; secretary, M. Michelangelo Olivin; treasurer, Chevalier Giulio Scorza; members of the council, Marquis Gerolamo de Mari, Count Carlo Roggio, Chevalier Garibaldi Coltellati, Commandant Cesare Radduino and Vitalo Bolla.

◆◆◆

For the Reo cup, which is open to motor boats using heavy oil as fuel, the French minister of marine has informed the organizers that the government will give gold and silver medals. The Automobile Club of France has contributed \$1,000 and the Automobile Club of Great Britain and Ireland \$500 for prizes. Several yacht clubs and individuals have also offered prizes. The event will take place August 8.

◆◆◆

A week of automobile and motor bicycle races has been arranged to take place during the month of May in Buenos-Ayres, Argentine Republic, South America. A special prize has been offered by the city council and all told the value of the prizes is reported to be over \$5,000. The agents for the Panhard, Mercedes, Fiat, de Dietrich, Mors, Darracq, Renault, de Dion, Griffon, Peugeot, Werner, Adler, Humber and Iris have entered cars.

◆◆◆

Although the motor boat race from Paris to the sea, otherwise called the Paris-Deauville race, takes place in August, twenty-eight racing boats have been entered. Among them are two Napier boats, one of 80, the other of 50 horsepower; Mercedes II, 90 horsepower, belonging to C. L. Charley; Serpillet, 100 horsepower, belonging to Gardier-Serpillet; Thornycroft, 60 horsepower, owned by M. Thornycroft, and several racers built by Clement-Bayard, the Hotchkiss Co., Panhard and Renault.

◆◆◆

Even the lay press is becoming expert and critical in motor boat matters, as witness the following: "In view of the growing interest in the exciting marine sport furnished by powerful motor boats, the special cable dispatch from Monte Carlo this morning will be widely read and discussed. Defects in the present type of these little vessels, as revealed by experience in the recent races, are clearly indicated. When participants in the contests find their nerves shattered and the rivets in their boats shaken loose, it is evident that there is something wrong. Our special cable dispatch points out the lack of correlation between the designers of the boats, the constructors of the motors and the designers of the screws, and suggests the lines along which the improvement of these powerful little craft must be sought."

Boston has the motor boat racing fever and will soon announce a list of races to take place the coming summer.

◆◆◆

H. J. Leighton, of Syracuse, N. Y., has just finished a 55-foot boat with 120-horsepower motor which is claimed will do 24 miles an hour.

◆◆◆

A motor boat regatta is scheduled for Saratoga lake, New York, for July or August. The lake is 5 miles in length, so that a 10-mile race is possible in one heat.

◆◆◆

Notwithstanding the miserable weather Chicago is having, several motor boats have been put into the water for the season, three being quartered in Lincoln park.

◆◆◆

The first number of Motor Boat, edited by Frank P. Prial, has made its appearance. It is nicely gotten up, well printed and is filled with such matter as should interest the average motor boat man.

◆◆◆

The Schlig Automobile Works, Evanston, Ill., was organized recently and is owned by Mark W. Shaw, of the Roth-McMahon Machine Works; John Green, who was formerly connected with the Locomobile Co.'s branch house in Chicago, and John Schlig. A garage with storage room and charging station is located at 1725 Maple avenue. A repair shop is located in the Park building, near Davis street and the railroad tracks. Two cars are now being built by the concern.

◆◆◆

While in most other cities the police force is on the warpath against automobile scorchers, in Buffalo, N. Y., the dealers, owners and a majority of the members of the automobile club have taken the first steps in complaining to the police department against the law-breakers. At present a speed of 8 miles is permitted in part of the city, and in other parts 10 miles is the limit. According to the new law passed in Albany, N. Y., the speed outside of the 10-mile district will be 15 miles an hour to the city limits and 20 miles per hour in the open country.

◆◆◆

In proportion to its population Rockford, Ill., has a greater number of automobiles than most any other town in the west. One for every 500 inhabitants is the proportion. The sixty-five cars are subdivided as follows: Rambler, Knox, Cadillac, Oldsmobile and Columbia, five of each; Baker, eleve; Winton and Ford, four; Waverly, Toledo, Orient, Autocar, three of each; Toledo, two; Thomas, Peerless, Conrad, Cotta, Michigan, Geneva and Deauville, one each. It is also a feature that thirty-one of these cars are touring cars, while only thirteen belong to the runabout class.

◆◆◆

James Levy, manager of the automobile department of the Mond Cycle Co., of Chicago, last week encountered hard times in trying to be a hero. A building across the street was blazing. Firemen and people were frantic. A girl appeared at the third floor window. "Who will save her?" shouted the chief. "I will," answered our dauntless hero as he dashed into the tumult of flame and falling beams. On the stairs he met her. "Come with me," he cried, but she shoved him cruelly aside and, walking down the steps, admonished, "If you try to flirt with me I'll have you pinched."

◆◆◆

# AMERICAN MOTOR LEAGUE

## OFFICERS:

ISAAC B. POTTER, President.  
Potter Building, New York  
CHARLES F. DURYEA, First Vice-Pres.  
Reading, Pa.  
W. GRANT MURRAY, Second Vice-Pres.  
Adrian, Mich.  
S. W. McBRIDE, Third Vice-Pres.  
154 Nassau St., New York  
FREDERICK B. HILL, Treasurer,  
32 Bluford St., Boston.

National Headquarters:  
132 Nassau Street, New York

## CHAIRMEN OF NATIONAL COMMITTEES:

LEGISLATION—  
George B. Ridwell, New York, N. Y.  
ROAD IMPROVEMENT—  
H. E. Oida, Lansing, Mich.  
LOCAL ORGANIZATION—  
Charles F. Potter, Denver, Colo.  
TOURISM—  
W. H. Baker, Buffalo, N. Y.  
TECHNICAL—  
Charles E. Doryea, Reading, Pa.  
MEMBERSHIP—  
Frank A. Egan, New York, N. Y.  
SIGN BOARDS—  
John B. Price, Hackett, Pa.  
RACING—  
A. G. Barchelder, New York, N. Y.  
HOTELS—  
Joseph Estorlet, Philadelphia, Pa.  
Francis N. Bain, Newburg, N. Y.

## OFFICIAL BULLETIN

### MORE ABOUT AMALGAMATION

Last week a circular letter was sent to each member with a return postal card upon which he was requested to inscribe his vote for or against the proposed uniting of the A. M. L. and the A. A. A. into one national body. Two questions were submitted:

1—Do you favor the proposed uniting of these two national organizations into one?

2—May we send you a few membership blanks of the American Motor Association, in case the merger is effected, and will you aid the officers in such ways as you can to enlarge and strengthen the new body?

Answers are already being received and the sentiment expressed is so far unanimously in favor of the proposed union.

### EVERY MEMBER SHOULD VOTE

All members of the A. M. L. are earnestly urged to place themselves on record in deciding this important question and to place the officers of the league in such position that they may report a large vote and therefore a very substantial interest on the part of A. M. L. members. To fill out the blanks on the postal card ballot requires but a moment of time, and in view of the importance of the proposition an expression on the part of each member is greatly desired.

On Friday of last week Secretary Butler, of the A. C. A., called at headquarters and reported that a ballot was being taken among A. A. A. members and that the decision of that body on the question of merger would be fully recorded by the end of the present month.

### ROAD INFORMATION

One of the prominent works of the American Motor Association, in case the merger is ratified, will be to collect and distribute in the most substantial way, road information, maps, road books, etc., for the use of members in all parts of the country. That information of this kind is greatly needed is evidenced by many letters received at headquarters of both organizations and the great need of accurate road books and maps is admitted by every user of the public roads.

### NEW YORK ROAD BOOKS

The road books already announced as in preparation by the A. M. L. have been held up, pending the question of the proposed merger, and when issued will undoubtedly bear the imprint of the new organization. They will be put upon the press as promptly as possible.

—the plates are entirely ready for two of these books and are nearly ready for the third—and the work of distribution will begin as soon as they are out of the hands of the binder.

### LISTS WANTED

The number of automobilists is increasing in all parts of the country and the A. M. L. reference lists must be kept up accordingly. The names and addresses of all automobilists are gladly received by the secretary and promptly recorded in the league card index files for future reference. If the reader can aid the league in enlarging this list by sending the names and addresses of neighbors and friends who have become users of motor cars let him write the names on a slip of paper or postal card and send it to headquarters. Such favors will be gratefully appreciated and promptly acknowledged.

### CHANGE IN HEADQUARTERS

National headquarters of the A. M. L. have been moved to the Vanderbilt building at 132 Nassau street, New York city, a half block from former address. The new quarters are in many ways better adapted to the wants of the league than those formerly used, but in view

of the enlarged demands of the organization it is not unlikely that a further change will be necessary before the end of the year. Meanwhile, and until further notice, address all communications to 132 Nassau street, Vanderbilt building, New York city.

### ROUTES TO ST. LOUIS

Chairman Augustus Post, of the A. A. A. touring committee, is also a member of the national touring committee of the A. M. L. and is doing valiant work in laying out and reporting routes to be followed by automobilists in trips from various parts of the country to the big exposition at St. Louis. Much of this information will be sent out broadcast through the newspapers, but special reports will be made from time to time to members of the national body. The tour will be conducted in the name of the new American Motor Association and all matters relating to the work and objects of either of the merging organizations will be carried on in the name of the new body as soon as the merger is complete. To say this is, in a sense, to forecast the result of the vote, but from the many expressions of approval which are being made on all sides and by members of both bodies it is highly improbable that the result of the vote will be other than largely affirmative.

### ROUTE SLIPS

Several requests for route slips have been received at headquarters and the kind interest of members who have thus volunteered to help the league is greatly appreciated. All printing has been held up pending the decision of the merger question, and route slips will be delayed till about May 1, when they will be sent forward. Each route slip will contain brief printed suggestions explaining how it is to be filled out, so as to describe fully and accurately the route from point to point, giving the character and material of the road, whether hilly, rolling or level, and distances between principal points. Each route slip is to be signed by the member who makes the report and who thereby, of course, becomes in a measure responsible for its correctness. There is but one reliable way of getting road information and that is by co-operation of a large number of persons who are moved by a mutual interest. The present road books are largely unreliable and incorrect, and experience has shown that the expenditure of money alone will not by any means secure the return of correct road information.

### THE AMERICAN MOTOR LEAGUE

is an organization to promote the interests of all users of motor vehicles; to ascertain, protect and defend their rights; to oppose and prevent the enactment of unreasonable and oppressive laws; to encourage the use of motor vehicles by agitation and instruction; to provide its members with printed routes, maps and guide books by which touring may be facilitated and encouraged; to promote the work of improving the public roads and the erection of proper guide boards, and other signs necessary to guide and warn the users of motor vehicles; to select and appoint official hotels repair shops and supply stations where its members may obtain reliable service at reasonable rates.

### WHO MAY BECOME A MEMBER

"Any man or woman, 18 years of age or over, of good moral character and respectable standing, friendly to the motor vehicle and its interests, shall be eligible to membership."

(Constitution, Article 2, Section 1.)

The League is extending its membership in all parts of the country. We invite all friends of the movement to join and aid in building up a powerful organization.

NO INITIATION FEE. ANNUAL DUES \$2 IN ADVANCE. OR \$3. 12 CENTS 1 YEAR'S SUBSCRIPTION TO MOTOR AGE.



# MOTOR AGE

VOL. V. NO. 17

APRIL 28, 1904

\$2.00 Per Year

## AMERICA'S FIRST AUTOMOBILE SCHOOL



**T**HE first automobile school in America, if not in the world, was opened in Boston in October, 1903, under the auspices of the Boston Young Men's Christian Association. The Boston association has in operation the most advanced school on the American continent, and enrolling nearly 1,400 students, with ninety-six instructors and 129 courses of study. These courses consist very largely of technical subjects, including architecture, naval architecture, mechanical engineering, structural engineering, steam engineering, chemistry, physics and law, so that automobile engineering was in line with their other work.

The first move was made by Frank P. Spence, the educational director, who has been a pioneer in evening technical school work in Massachusetts, and has had this school in charge from its earliest inception. Before taking any steps Mr. Spence secured the co-operation of Colonel J. T. Soutter, president of the Massachusetts Automobile Club; G. H. Lowe, of the White Sewing Machine Co.; A. F. Neale, of Studebaker Bros. Mfg. Co.; Isaac H. Davis, of the Crest Mfg. Co.; Dr. Walter G. Chase, a member of the Massachusetts Automobile Club, and J. S. Hathaway, of the White Sewing Machine Co. These gentlemen constituted an advisory board and discussed all the problems pertaining to the school. Under their supervision a course

of study was drawn up and the program of work arranged. The work offered consisted of a course of lectures, twenty-five in number, covering the general principles of steam, gasoline and electric traction, these lectures, each 2 hours in length, being fully illustrated by lantern slides and parts of carriages. In addition to the lecture course a shop course was conducted, consisting of two 2-hour exercises each week in the Park Square Automobile Station, illustrated by the different types of carriages which were knocked down, dissected and each part fully discussed by means of the actual handling of the object or by blue prints and sketches on the blackboard. After the carriage had been studied in detail, it was assembled before the class and its entire mechanism discussed.

A drafting course of 4 hours per week accompanied the two other courses, during

which the mechanism of a steam and gasoline carriage was studied in detail and complete drawings made of the same. Another feature of great importance was one night per week at the establishment of several different carriage dealers, where this particular type was studied in detail. On Saturday night a "quiz" or review was held, at which time all of the points covered during the week were taken up in a thorough and systematic manner.

A card was issued to each student for each course, containing a complete outline of the subject under discussion, and as the points were studied they were checked by the student and this outline was carefully followed by all the instructors and the Saturday night examiner. At the completion of each course a thorough written examination was given to the student, being rated according to the mark received in the Saturday night "quiz" and on the regular work.

Following the course of lectures in the shop course, arrangements were made for road practice, and all the students obtaining "B" or above were given an opportunity to study road manipulation. Arrangements were also made with the Massachusetts Automobile Employment Bureau so that students having taken the road work and holding certificates from the school applied for positions.

The success of the school has been remarkable, although owing to the fact that it has been a wholly unexplored field, difficulty was experienced in securing equipment; still, the students, with few exceptions, have pronounced the work excellent.

The expense of conducting such a course was necessarily very great. The lecturers were of the highest type and those who covered a number of subjects and came from a distance were liberally compensated. In addition to this the large number of instructors, the advertising, rent, insurance on carriages, printing matter and other expenses made the budget very heavy.

The school was attended by 300 individuals, representing every class of society, from the banker and broker to the young machinist

**EDITOR'S NOTE**—This article was written at the request of Motor Age by J. S. Hathaway, of the advisory board of the Boston Y. M. C. A. automobile school. The experience of the Bostonians in their first year of automobile school management is valuable on account of the rapid spread of this class of special instruction.



earning \$5 per week—a truly democratic assemblage rarely seen in an American institution. To complete the entire prescribed course, 6 nights per week were required, and it has interested the management to note the regular attendance of all classes, many persons having been at the school or garage with scarcely an intermission through the entire winter.

Those who received the most immediate benefit from this course were those who proposed buying carriages and those who already owned them, and the number of carriages sold to students of the school has been amazing.

The assistance given the school by the manufacturers' and dealers' associations, the local press and trade journals has been most valuable; much of the success of the school is attributed to their loyalty and support. It is felt that similar schools should be in operation in every large city and town, for not only is there a demand for skilled drivers, but the saving in repairs owing to more intelligent handling on the part of the owners will prove a boon to the manufacturers and dealers. At the time of the Boston automobile show the school was provided with a well-lighted, convenient room by the committee, and every courtesy was extended.

There is but one element of danger in the conduct of such a school, which lies in the possible tendency for instructors to unduly emphasize the good qualities of certain carriages, and try influence the prospective buyers to purchase the car in which they have a special interest. Action of this kind would be suicidal and destroy the usefulness of any school. The lecturers in the Boston school have no connection with any automobile concern and consequently had no axe to grind.

The instructors in the shop work were pledged to be truly unbiased in the opinions expressed, and as a result the carriages sold to the members of the school have covered a very great range. This principle of impartiality was made the keynote in the school and has been rigidly adhered to, so positively, in fact, that any employee found guilty of trying to influence any member of the school would be at once removed.

Plans for the ensuing year are even more elaborate than in the past. A superintendent has been appointed to have charge of the school and be responsible for its conduct. Under his direction a faculty of able men will be appointed, who will conduct the same general line of work offered in 1903, with the addition

of road lessons throughout the winter under cover, and special emphasis on the shop or laboratory features.

A course in motor boats will also be offered, dealing with the drafting of the hulls, construction and power plants. This last course will be given by one of the leading naval architects and gas engine experts in New England.

Taken as a whole the automobile school is, it is believed, a necessary adjunct to the trade, and is much more valuable when conducted under absolutely non-partisan auspices than would be the case should any manufacturer stand back of it, as on the former basis the advertising features are eliminated wholly, and no one is influenced in his purchase, but is taught to have a just and intelligent power of discrimination and appreciation. There will be some satisfaction in constructing well-designed vehicles of whatever grade or cost when the purchaser has been so instructed that he can get all out of the carriage which its designer and builder intended.

The automobile school is unique, but it is believed it has a permanent place in the educational activities of every great municipality, and its scope and usefulness will increase with the development of motor traction.

## INTERNATIONAL AND OTHER RACE PLANS

**N**EW YORK, April 26—Despite the fact that next Monday, when the candidates for the American team must present themselves to the A. C. A. racing committee for inspection and orders as to the road tests, to which they are to be subjected, is so near at hand, just what will be the details of the elimination trials and just where they will be run is still clouded in mystery. There is every reason to suspect that the committee itself has come to no very definite decision in the matter.

Louis P. Moers, who is in town, has had a conference with the committee and in reply to queries has given such information and suggestions as his experience in the Irish race last year prompt.

"I am in favor of the candidates for the team being made to go the full distance of 320 miles that will be required of them on the four laps of the Homburg course," said Mr. Moers to a Motor Age man. "No mere short distance sprint will suffice to prove a car worthy to represent this country in this long speed and strength test of automobiles. No car should be on the team that has not actually proved itself able to go the distance at a speed giving it a fair chance to win.

"I am willing to stand by such a test of my car. I have tried it out and am confident it will make good. I also hope to have my other two cars ready in time to take part in the test. They are of the same model as the completed one except that the going varies between 85 and 90 miles an hour. Barney Oldfield is waiting to see me in Cleveland, but I shall not have any talk with him about driving a Peers car in the trials or races until I learn the decision of the committee as to the distance and manner of the elimination tests. I expect to meet the committee again this week and will then probably know a bit more of what is to be done."

The Winton Bullet and the Winton Pup were shipped from Dayton, Fla., last Saturday, so that it is practically assured that the former will get here in time for inspection on

Monday. There was no news this morning at the automobile club as to the stage of completion or possible tuning up the Hewitt car has attained. As can readily be seen, there is the possibility of numerous technical questions arising as to the eligibility of some of the cars to start in the trials. It is quite well understood, though, that the committee will not allow technicalities to stand too much in the way of obtaining the best possible team to be hand under the circumstances, and also that the committee will not permit of the club being represented by any cars that thorough trial has not proved likely to bring credit to the American sport and industry.

The stories that have found their way into the columns of an afternoon and morning paper of this city that W. K. Vanderbilt, Jr., has been invited to drive a Mercedes on the German team bear the earmarks of pure "fakes" born of the probable and very natural willingness of the Daimler company to have the world's straightaway mile record holder pilot one of its cars, both by reason of his skill as a racing man and very obvious business considerations, should he express a desire or even willingness to do so.

The stories of W. K. Vanderbilt, Jr., and Foxhall P. Keene driving American team cars also have more of a foundation in desire than in fact. Any one of the entrants would doubtless be glad to have either one of these gentlemen as a driver by reason of their skill and experience and, to be brutally frank, advertising value. Neither of them, though, can be reported authoritatively as having intimated or expressed a willingness, much less a desire, to drive in the race. It is understood, moreover, that Mr. Vanderbilt has planned to spend the summer in this country. He is now absent from the city on a trip to California by way of Texas.

The racing board has taken final action in the matter of the applications of Barney Oldfield and E. C. Hausman, suspended indefinitely for riding at unsanctioned meets, for reinstatement. Oldfield has been let off with a

fine of \$100, upon payment of which he is eligible to drive again in races. This action by the board meets universal approval here as sufficiently asserting the board's dignity and maintaining the discipline of the game.

It is surmised that the terms of Hausman's reinstatement were originally the same as Oldfield's. Decision in the former's case was withheld when the verdict in the latter's was given out. Report had come that Hausman, despite his suspension, was to ride at Memphis. A wire later told the news that he had ridden. His preliminary plea was that the track people would seize his car if he did not race. It is said that the board had a tip that the seizure of "999" would have more to do with debt than any racing contract broken. Taking this view of it the board not only fined Hausman \$100 but suspended him until October 1 and warned all racing men against competing with him under penalty of suspension.

Burney has gone to Detroit to consult with the Packard people. He will join in an examination of the Gray Wolf with the idea of passing on its availability for the international cup race. If it be decided to enter it for the elimination trials Barney will doubtless receive an offer to drive it.

The Winton's intended attempt at the world's records at Ormond has evidently been abandoned. News came today that both the Bullets had been shipped north from Dayton on Saturday. The idea is probably to be sure to have the Bullet eight-cylinder on hand here for inspection and trial on May 1.

William Wallace, chairman of the race committee of the Massachusetts Automobile Club, was in town last week. He called on Hollander & Tangeam with a view to arranging a match between one or the other of the Fiat importing firm and H. L. Bowden and his 60-horsepower Mercedes at the club's meet at the Readville track May 30. The gentlemen approached stated their eagerness to match the Fiat international cup model car, which is expected to reach here May 10, against Mr. Bowden, but

stated their desire to have Claude Fogelin drive it. To the suggestion of Mr. Wallace that Mr. Bowden did not care to drive against a professional the reply was made that Mr. Fogelin, though he drove, to be sure, for money, was a member of the Italian club and recognized as a gentleman driver. Mr. Wallace said he would convey the reply to Mr. Bowden.

Nathaniel Higgins has returned from California and brought with him his Deauville racer, a counterpart of the car Henri Page drove so successfully in track races last season. Mr. Higgins will enter the car at some of the track circuit meets.

A new record was established between the Delaware river and the coast, across New Jersey, Sunday, by George Wilkins, of Philadelphia, who made the journey, estimated at about 60 miles, in 1 hour 18 minutes. The machine used was a Winton car designed for speed, but with four seats.

The English illuminating race will probably be decided May 10, according to a London report, and 500 constables, besides many officials of the Automobile Club of Great Britain and Ireland, will assist the local police authorities in watching the road where the race will

be awarded to the rider who drove farthest without pedaling.

The six motor cars which started in the anti-skid test from Paris to Nice and return, March 30, reached Paris April 13 after having completed a circuit of about 1,600 miles over some of the roughest roads in France. The cars were a 14-horsepower Renault, a 24-horsepower

enlashed and officially sealed and ribbon-tied copy of his reinstatement by the American Automobile Association racing board. Negotiations resulted and Oldfield is once more the Winton speed merchant. In speaking of the matter Oldfield says:

"I long ago declared that it was my ambition to compete in the James Gordon Bennett



AT THE START AND ON THE GRADE AT THE BOSTON HILL CLIMB LAST WEEK

be run in order to avoid possible accidents.

The five Napier racers which will probably be started in the British trial race will be driven by Lieutenant-Colonel Mark Mahew, John Hargreaves, J. W. Stocks, Clifford Earpe, and S. F. Edge. The latter's brother, Cecil, will be on hand as a supplying driver.

The English annual reliability trials for motor cycles will probably be held from June 25 until July 2. Instead of a continuous run there will very likely be a 100-mile run every day during 5 days. On the last day of the tournament a hill-climbing contest will be held.

A hill-climbing competition for members of the Automobile Club of Great Britain and Ireland has been arranged for May 14. Only racing motor bicycles with full road equipment may enter the contest. Pedaling will not be permitted, and in case no rider reaches the top of the hill the first medal will be

awarded to the rider who drove farthest without pedaling. The six motor cars which started in the anti-skid test from Paris to Nice and return, March 30, reached Paris April 13 after having completed a circuit of about 1,600 miles over some of the roughest roads in France. The cars were a 14-horsepower Renault, a 24-horsepower

enlashed and officially sealed and ribbon-tied copy of his reinstatement by the American Automobile Association racing board. Negotiations resulted and Oldfield is once more the Winton speed merchant. In speaking of the matter Oldfield says: "I long ago declared that it was my ambition to compete in the James Gordon Bennett

cup race. This is the world's great automobile derby and in this big international event all the real famous drivers are pitted against one another. When Mr. Winton decided not to enter a car in the cup race this year I was heavily disappointed, because I felt that the Winton Bullet and I would make a winning combination, and, since I was under contract to Mr. Winton, I could not hope to compete except on a Winton car. Consequently when I was released from my contract with Mr. Winton a few days ago I immediately set about to look over the cup race cars that were being manufactured in this country.

"While I was considering several flattering propositions I learned that, through a fortunate circumstance, the Winton Bullet would after all be entered as an American competitor in the international race provided the committee of the Automobile Club of America would accept it. I have spent a good deal of time in the seat of the Bullet during the past summer and thoroughly appreciate the possibilities of the car. Believing that the Automobile Club of America's committee would not disregard this proffered entry of the Bullet, I returned to Cleveland and solicited the privilege of driving this car. The result is my reinstatement with the Winton Motor Carriage Co. as driver of Bullet II.

"I am thoroughly happy as a result and expect to make a great showing if permitted to drive in the cup race. I expect to make this good showing, not alone because I have confidence in my own ability, but because I appreciate that the Bullet is one of the fastest."

This re-engagement of Oldfield by the Winton company will without doubt prove satisfactory all around, for Oldfield's ability as a driver and his experience and consequent familiarity with the Bullet render the chances of this machine in the international race much better than though manned by a new driver.

#### OLDFIELD ON THE BULLET

Cleveland, O., April 27.—Barney Oldfield will drive Winton Bullet II in the eliminating trials for positions on the American international cup race team and probably in the cup race itself. While all sorts of rumors have been flying around about Oldfield's connection with other cars, Peerless, Packard, 999, etc., Barney returned to Cleveland and showed the Winton company a genuine steel engraved,

# MOTOR AGE

Published Every Thursday by  
THE TRADE PRESS CO.

**1303 MICHIGAN AVENUE CHICAGO**  
Telephone Calumet 3011

New York Office, 114 West 15th Street,  
London Office, American Publication Re-  
sides, 10 Manor Park Rd., Haringey, N. W.

REGISTERED  
TRADE MARK  
OF THE  
TRADE PRESS CO.  
CHICAGO, ILL.

REGISTERED  
TRADE MARK  
OF THE  
TRADE PRESS CO.  
CHICAGO, ILL.

REGISTERED  
TRADE MARK  
OF THE  
TRADE PRESS CO.  
CHICAGO, ILL.

Entered at the Chicago Post Office as Second  
Class Mail Matter

**Subscription, Two Dollars per Year**  
Foreign Subscription, Four Dollars

Any Newswriter may obtain Motor Age through  
the Western News Co., Chicago, or any  
of its branches, on a retainer basis

## AUTOMOBILE SCHOOLS

**A**UTOMOBILE schools are now in operation in many cities. To such an extent has this movement taken root that the New York Y. M. C. A. is seriously considering the expenditure of considerable money for equipment which, if installed, will probably eclipse that of any other school in America.

The work that has been done at Boston is outlined on another page of this paper.

Some of the manufacturers of automobiles believe these schools are unnecessary and ineffectual. They argue that the man who handles horses learns all about them in the stable and is not required to possess an intimate acquaintance with the details of equine physiology.

All of which may be true, but does not militate against the desirability of veterinary colleges, or change the fact that the man who does understand a horse thoroughly is worth a higher salary than the man who does not.

There are two classes of pupils available—first, those who desire an elementary knowledge of how to operate a car and, second, those who wish to acquire a practical knowledge of automobile design and construction.

The first class may appear, at first glance, to be an unimportant one. It is not. The demand for chauffeurs for pleasure vehicles is equal to the supply. Competent men are offered good salaries.

But it is in connection with the commercial end of the business that the education is the more important. An eastern concern has lately decided to abandon, temporarily at least, the production of commercial cars on the ground that it is impossible to procure and keep competent operators.

The company has been in the habit of educating men in its factory, only to find that as soon as they became competent they were offered positions as drivers of private cars at salaries which no commercial house could afford to pay. This point was brought out in Motor Age last week.

It may be an exaggerated case. It may be that peculiar intimacy with this particular subject is essential to its successful operation. But it indicates the necessity of offering education to as many men as possible, for the day of the commercial wagon approaches rapidly.

The more advanced course is even more important. Wherever automobile men congregate the difficulty of securing good men in various departments is discussed.

Good men are scarce and expensive—far more expensive than men of equal ability in other lines, because of their scarcity.

We are to become, according to the belief of everyone in the trade, a nation of automobile users—for profit and for pleasure. We cannot become so until the people understand the machine and know how to take care of it.

The average man cannot afford to hire a chauffeur to look after his car. He must needs know how to do it himself.

Therefore, both for the development of the men we need in the industry and for the education of the masses, which education will lead to the sale and use of a greater number of automobiles, we need schools, and the more of them the better.

Older trades than ours have discovered the wisdom of offering educational advantages to young men. The carriage builders, for example, maintain a school in New York with eminently satisfactory results.

The steam engine—its principles, design, construction and operation—is a common subject of instruction in all classes of schools. Not only is the designer-to-be taught the higher technology of this old source of power, but those who wish to understand it in all degrees of practical and theoretical knowledge are given ample opportunity to obtain first-class instruction.

The gas engine is to be a most important factor in power production and its application to automobiles will be one of its most important applications.

Both the power and its use deserve the common attention and a common knowledge of their principal features.

If, therefore, the Y. M. C. A. or any other association is willing to assume, for the automobile industry, the burden which the carriage makers find it desirable to maintain at their own expense, why not offer them all possible encouragement?

## SELDEN PATENT SITUATION

**T**HE opinion is expressed at the office of the Association of Licensed Automobile Manufacturers that the suit now pending against the Ford Motor Co., and which, it is commonly supposed, will determine the validity of the Selden patent, will come to an end about 12 months hence.

The evidence of the Electric Vehicle Co. in support of the patent has been taken. The Ford company, desirous, no doubt, of exhausting every legal resource, filed certain objections to the complaint, asking for proof of many things, including the ownership of the patent.

The Electric Vehicle Co. was given 60 days from April 10 to file the proofs.

Then the Ford company will commence to take testimony, consuming, according to present expectations, about 90 days.

Then will follow much expert testimony, the complainants will take testimony in rebuttal and the defendants in rebuttal.

The next, arguments, a long wait, the court's decision, and, in all probability, an appeal, no matter which side wins.

If the complainant wins, we be to the independents, for then, even though an appeal be taken, far more aggressive steps will be permissible than may be taken at present.

If the defendant wins, the lot of the independent maker will be easier and he will be safe from attack for a long time.

It is reported that both sides, in the present suit, are pushing matters as rapidly as possible. A continuance of that policy means a comparatively early decision, but the case can hardly be disposed of as promptly as has been intimated.

The pressure of other cases, vacations, absence of attorneys, the convenience of witnesses and a score of other causes invariably delay progress in suits of this character. The famous bicycle bottom bracket suit has been pending over 4 years and, according to the defendants, is still a long way from settlement.

It is greatly to the credit of the litigants, however, that no time is being wasted.

The question at issue is one in which the whole industry is widely interested. If the patent be sustained the rights of the owners and of the members of the association will have been made clear and the person who risks capital will do so with the certainty of trouble ahead.

If it is overthrown the business of gasoline carriage building will be open to all, so far as that particular feature is concerned. The trade will be rid of an uncertainty which has been oppressive to licensed and unlicensed makers alike.

The association may or may not have outlived its usefulness in that event. It controls, or rather has the right to use, many other patents, and its constituent parts may have become so welded together in other ways as to enable it to continue an important, if not a dominant factor in the industry.

To that end the gentlemen most active in its management are working. But whatever reliance is placed by them upon their numerous minor patents, there is still no doubt that the keystone of their contention is the Selden patent. It is their flag.

✻

We may not, like France, have twenty-nine entrants for positions on the cup race team, but then, it only takes one car to win the race. Our chance is not to be sneezed at; we are bound to win the international event sooner or later and once the cup comes to this side of the ocean it will gather cobwebs before it goes back.

✻

A Philadelphia bicycle policeman recently arrested an automobilist by diving into the car when the latter's pace became too fast for him. Some folks will do most anything to get an automobile ride.

✻

Moors wants the cup race candidate cars to be driven 320 miles in the A. C. A. test. Good scheme. It is better to find out on this side of the Atlantic which cars can go the whole race at one whirl.

✻

In the midst of this licensing and numbering business an enterprising street faker might do good business selling unofficial numbers at reduced rates.



# Motor Car Family Trees

No. 6  
THE OLDSMOBILE



Runabout—1890  
Touring Runabout 1901  
Runabout—1902  
Standard Runabout 1901

First Olds Gasoline Car 1887  
Electric Runabout 1901

Light Delivery 1903  
Light Tonneau 1904  
Runabout—1901  
Runabout 1903

## SWELL AUTOMOBILE INN

### Handsomely Appointed Place at Westchester With Power Boat and Motor Car Service

New York, April 24—New York has no automobile inn. It is not merely called an automobile inn. It is an automobile inn run by an automobilist for automobilists. Joseph Cowan, an enthusiastic owner and driver, has established it at Clason point on the East river in the town of Westchester. He calls it Clason point inn. Thus early in Mr. Cowan's bustling administration it has become a recognized rendezvous for automobile runs.

Since 1908 Cowan a year ago struck it rather rich in Wall street, and realizing the evanescence of wealth crumpled in ticker tape, got out and went to Europe for an automobile tour; came back with a car, which he sold at enough profit to pay for another tour abroad, and late last autumn landed here again with a fine 15-horsepower Panhard, and nothing to do but rust coupons. By nature a restless hustler he looked about for some scheme to engage his enterprise and capital. His brother-in-law happened to own this Clason point tract of land, on which was a farm house near the water's edge.

"Ah, ha!" quoth young Cowan. "I will turn this ranch into an automobile rendezvous, where I can talk automobile with automobilists and drive automobiles over the fine Westchester roads and play with automobiles all day long. And look you at that beautiful sheet of water there! I'll make a play for the motor boat sport and trade too."

Cowan had the cash, the nerve, the hustle and the ideas. The result of it all is that he has established Clason point inn as an automobile and motor boat rendezvous that is already popular and sure to be famous the land over among automobilists and motor lunatics when he has had time to carry out all his ideas.

On the lawn in front of the inn he has set up the electric fountain which was a feature of Lima park last year. He believes automobilists have money to pay for the best, and so to assure exclusiveness and a cuisine not to be quibbled at he has set a stiff scale of prices. He proposes to run the beer and clam bake trade to a casino and bathing grounds he has established near by and declares if the vogue of the inn among automobilists becomes extensive enough he will close the casino altogether and enter only to the fraternity.

His dining room is spacious and equipped with a score of tables for tete-a-tete, quarte and sextette parties. An instrumental and vocal quartette of three colored men and an embryo Black Patti keep the fun and melody going all the time with tireless picking of popular airs on banjo and guitar and droning of coon songs in solo and chorus. One may eat and drink and be merry and enjoy a continuous coon concert. And so the automobilists linger in the concert hall-dining room afternoons, evenings and far into the post midnight hours.

Mr. Cowan has provided access to the inn for non-automobile or motor boat owners by a power launch line running from the foot of East One Hundred and Thirty-eighth street, and by gasoline automobiles from the trolley line, a little over 2 miles away. The fare each way by boat or automobile is but 15 cents.

The run by boat through Hell Gate and the upper East river is about thirty minutes. It is 12 miles from Central bridge to the inn by automobile.

The automobile equipment of the inn consists of a 15-horsepower Panhard, a Mobile, a Locomobile, two 5-horsepower de Dion motor-cycles, and three Knox single-cylinder 8-horsepower tonneaux. The last three are used in the passenger service between the trolley line and the inn. David Landau, for 3 years a designer for the Electric Vehicle Co., and a former designer for the Daimler Mfg. Co. and the National Battery Co., is in charge of the automobile plant.

This same Landau is a frequent contributor to the technical press and very much of a statistician. He gave the Motor Age many some very interesting figures and observations about the running of the passenger line. "For this purpose," said he, "we use, as you know, three single-cylinder Knox tonneaux. They carry from six to nine passengers. The distance to the trolley is 2 miles 275 feet, or 4 miles 550 feet for the round trip. When I speak of 'trips' remember I mean 'round trips.' The average of the grade is level, though there are one or two gradients as high as 11 per cent. There are many turns to the road. The surface is that of the ordinary good dirt road.

"We received two Knox cars on April 13," he continued, "fresh from the factory and in our early experiments ran them sometimes empty and sometimes with passengers. For the first three or four trips the average time made was from 27 to 28 minutes. After that the rate dropped to 24½ minutes. After dinner, when the engine was again cold, the rate rose to 27 minutes and then dropped gradually to 23 minutes. One car, which was kept in continuous service with one driver, made seven or eight trips and dropped gradually to 23 minutes. With a new driver put on the time jumped to 27 minutes. The engine heating and the personal equation had to do with this.

"On the start the cars were filled with 10 gallons of gasoline and also with a measured 1½ pints of oil. The runs were continued until all the gasoline had been used. This happened after an average run of 108.4 miles in this time 1.6 pints of lubricating oil was used. The average working time of the engines was 9½ hours. This gives an average speed per hour of 11 miles. The average passenger load was four passengers with a maximum of 9 and a minimum of 2."

"With gasoline at 15 cents per gallon the average cost for this item was 1.43 cents. With lubricating oil at 35 cents per gallon the cost was 4.38 cents per pint or 7.008 cents for the 1.6 pints used. This gives the cost of gasoline and oil per mile at about a cent and a half.

"Last Sunday the three cars carried 264 passengers in 4½ hours. I figure it costs us, exclusive of wear and tear and repairs, 6 cents per passenger per round trip. Getting 30 cents as we do, you see, even deducting repairs and wear and tear, we are left a pretty good margin of profit."

Such is Mr. Cowan's little scheme and such are the plant, methods and personnel of the experiments. There is a whole lot for the automobilist, the manufacturer and the possible investor and promoter to study in it. Perhaps, in view of all this "puff" Mr. Cowan and his automobilist inn needs no apology.

## BIG PARADE PLANS MADE

### Date Is Set for Saturday of This Week and Will Include All Kinds of Motor Vehicles

New York, April 25—After two changes of date, the open parade the Automobile Club of America is promoting has been set for next Saturday. The speedy parade of April 30 caused a change to April 14, which it was found was set for the police parade. It was impossible to fix the date for April 21, as the club's spring tour starts on April 26 and all hands will then be busy with preparations for it.

So it is that Chairman Brooks and his fellow committeemen have got a big hustle on themselves to make the affair a worthy one and somewhere near commensurate with the importance of the sport and industry. All the members have been urged to participate and the garage keepers have set to work with a will to see that their cars are well represented. Even on such short notice it seems likely that the parade will be a creditable inauguration of an annual series of these functions.

The parade will start at 2 o'clock sharp and move in the following divisions: Guests and officers of the club, American gasoline runabouts, American gasoline touring cars, noted racing cars, foreign gasoline cars, electric runabouts, electric pleasure vehicles, steam pleasure vehicles, electric cabs and hansoms, commercial vehicles.

Mayor McClellan will drive his Deauville in the first division and be the reviewing officer from the club house windows, where he and the guests of honor will dismount and take their stand at the close of the parade.

The parade will start from the club house at Fifty-eighth street and Fifth avenue, at 2 o'clock sharp, entering the park at the Fifth avenue entrance and following the east drive to One Hundred and Tenth street. It will then cross to the west drive and proceed to Seventy-second street, thence to Riverside drive up to and around Grant's tomb, returning via Riverside drive, Seventy-second street, Broadway and Fifty-ninth street to Fifth avenue and south past the club house. Permission having been obtained, the commercial vehicle division will join the procession as it emerges from the West Seventy-second street gate of Central park.

Each division will be in charge of a member of the committee, who will take his stand at one of the northeast corners of Fifth avenue, from Fiftieth to Fifty-eighth street, at half past 1 o'clock. Those desiring to take part will fall in on the streets indicated as the forming ones for the class to which their cars belong. The committeeman's car will indicate this.

The divisions, with marshals and places of assembling, are as follows:

Chief marshal, Emerson Brooks, chairman runs and tours committee.

First Division—Guests: George E. Adams, marshal; assemble in East Fifty-eighth street.

Second Division—American gasoline touring cars. Milo M. Belding, marshal; assemble in West Fifty-first street.

Third Division—American gasoline runabouts. Frank Evelyn, marshal; assemble in West Fifty-second street.

Fourth Division—Foreign-built automobiles and racing car section. Robert Lee Morrell, marshal; assemble in West Fifty-third street.

Fifth Division—American steam pleasure vehicle, Augustus A. Post, marshal; assemble in West Fifty-fourth street.

Sixth Division—American electric pleasure vehicle, C. H. Gillette, marshal; assemble in West Fifty-fifth street.

Seventh Division—Electric cabs, W. H. Brown, marshal; assemble in West Fifty-sixth street.

Eighth Division—Commercial vehicles, J. D. Rader, marshal; assemble in West Fifty-seventh street.

The guests' ears will assemble on Fifty-eighth street, between Fifth and Madison avenues, and will proceed down Madison avenue and along Fifth street to Fifth avenue turning north on the latter. The divisions will move into Fifth avenue according to their positions as the parade passes up the thoroughfare.

Winthrop E. Scarritt, president of the Automobile Club of America, will lead the procession with the chief marshal.

## OHIO BILL PASSED

Cleveland, O., April 26.—The automobile bill introduced early in the session of the legislature by Representative Bassett, of Toledo, has been passed by the senate and will undoubtedly be signed by the governor, making it the law in Ohio. The measure has had careful consideration in both branches of the legislature and while it affords reasonable protection for the traveling public, it is approved by drivers and automobile dealers. Half a dozen automobile measures were introduced during the session of the legislature and the fact that the Bassett bill was finally selected for passage after a vigorously waged fight and several public hearings, is sufficient tribute to its excellence. One of the other automobile bills—that introduced by Senator Overturn—passed the senate and is now on the house calendar, where it will be permitted to expire. The Overturn bill contained the amusing provision that chauffeurs must stop and speak soothing words to horses frightened by chugging motors.

In brief the important provisions of the Bassett bill are as follows: Upon signal from the driver of a passing horse a chauffeur must stop his automobile. Upon request, he must also stop his engine. White lights must be displayed in front and red lights in the rear of automobiles on the highways after nightfall. The speed limits are 8 miles per hour in the congested districts of cities; 15 miles on other city streets, and 20 miles on country roads. Local authorities shall not further restrict speed limits. This provision is to protect automobiles against unreasonable restrictions, and possible arrest for violation of unknown local laws. The penalties for violation of the Bassett law are fines from \$5 to \$50.

## NO RACES IN NEW JERSEY

Newark, N. J., April 26.—There is no chance for the running of the Vanderbilt road race and the elimination trials for the international cup team over New Jersey roads. Good courses have been discovered, but the state laws are directly against any such thing and the local authorities have no laws by which they may allow the contests. Quite recently C. S. Calvert discovered an ideal 50 miles in the circuit, and it was exploited by the local papers. New Jersey automobilists are now endeavoring to find some flaw in the law which will allow them to make a bid for the races, and the local authorities are being interviewed with the idea that they may overlook the law themselves sufficiently to allow of the contest being held.

## STILL TALK HILL-CLIMB

### Supremacy In Two Classes Unsettled—Steam Men Disappointed—One Protest Is Made

Boston, April 23.—The hill-climbing contest of Tuesday furnished food for 7 days' discussion, which promises now to exceed the usually allotted period. The fact that two machines should be tied for the premier honors of the day was a surprise in itself, but it is not the first time powerful machines have made the same time in a contest, as shown by the records of the Nice week, when two machines tied for the mile standing-start record. In the opinion of the majority of automobilists hereabout the question of which is the better hill climber, the Georges Richard-Brazier or the Mercedes, is still unsettled. Neither Mr. Bowden nor Mr. Hills is likely to meet again in a contest with these machines, and the offer to bring about a meeting availed naught, as Mr. Hills declined to drive against a substitute for Mr. Bowden, and the latter did not offer any other condition of meeting.

There is, however, a chance that the tie in the electric class will be settled, as upon the settlement of the argument depends the possession of the cup offered in that class. Mr. Farney, who drove the National, is particularly anxious to have another meeting, while Mr. Marvel, who drove the Pope-Waverly, is content to let matters remain.

The steam men are disappointed over the results of that class, as they had banked on Mr. Durban reducing the record considerably below the mark created by the gasoline cars. Mr. Durban has a fast car, and was evidently storing up considerable amount of steam, that would have carried him to the top of the hill in less than 15 seconds if his boiler had not opened on him, as it is said to have done.

The only protest that has been made was one from L. J. Phelps, whose car holds several against-time records on the hill. Mr. Phelps objects to the system of classification, which permitted so-called racing cars to compete against so-called stock machines, holding that special racers like those of Mr. Bowden, Mr. Hills and Mr. Nestman should have been placed in a class by themselves. While this may be true, the conditions of entry did not require such division, and in the minds of many it seems hardly the proper thing to protest against the classification after the running off of the contest. The contention is that these cars are hardly practical as road vehicles, having had to be towed to the place of battle, whereas other cars went there under their own power. In the case of three of the cars this was so, but Mr. Rogers' Peerless car was a stock car in every sense of the word, having a special body fitted, and being in the exact condition as Mr. Rogers will have it on all his tours this year. Mr. Phelps is inclined to think his car's record of 27 seconds is still the best time made on the hill by a stock car, claiming the stock cars used were specially constructed. The contest was ridden under the rules of the A. A. A. and no one else has objected excepting in general conversation, the idea being that cars should be classified according to their power and not weight.

Joe Tracy, the well known Peerless car driver, was greatly disappointed over the fact that he did not get his old racing machine in the Commonwealth avenue hill-climbing con-

test. When he came to get the car in shape he found his high gear had in some way or other become ineffective and it would be impossible for him to get the car in shape in time. He remained in Boston until Thursday, when he went back to New York, saying he would get a new gear and return to Boston within a few weeks and annex the record for the climb.

## WANT TO TAX BISON MOTORISTS

Buffalo, N. Y., April 25.—Automobilists of this city are considerably wrought up on account of a proposed city tax on automobiles. The board of aldermen last week about decided to tax every automobile, horse and bicycle. The plan is to tax runabouts \$5 a year and touring cars \$7.50 a year. It proposed to tax a horse \$1 a year. It is probable that the Buffalo Automobile Club will take a hand in this matter when the affair is brought to a focus. One alderman made the statement that automobiles damaged the asphalt more than a horse, inasmuch as the gasoline leaked from the machine on the pavement and softened the asphalt. Mr. Clifton, of the George N. Pierce Co., pointed out in connection with the proposed tax that the automobilist is taxed already, inasmuch as he pays a license for every new machine and for every individual machine in his possession.

The Buffalo Automobile Trade Association held a general meeting last Monday evening at the Iroquois hotel. There was some talk on the advisability of conducting a race meet, and a committee consisting of Messrs. Jaynes, Roe, Cramer, Wilcox and Robertson was appointed to report at the next meeting.

N. E. Oliver, manager of the Buffalo branch of the Diamond Rubber Co., has secured a patent on a rim to which the regular G & J type of tires can be applied. This rim is particularly simple and a tire can be taken off and put on again in 2 minutes. Mr. Oliver says the Diamond Rubber Co. has practically decided to adopt his rim for 1905.

The Buffalo Motor Cycle Club held another meeting last Thursday evening. The first run took place Sunday, and after a parade through some of the principal streets, the course extended through Williamsville and Tonawanda, but unfortunately rain fell before the trip was half over and only fourteen of the riders were able to complete the run.

## TO RACE AT OLD ORCHARD BEACH

Boston, April 23.—An effort is to be made to develop Old Orchard beach in Maine into an automobile race course, to be used during the summer months. The beach is hard and firm, and extends some 10 or 12 miles, with 100 feet of width with the tide out. The course is said to be an acceptable one for automobile racing, and in the near future a party of automobilists purpose visiting the beach with big machines to learn its value. Harry Fosdick will take up a couple of Wintons, Hills will take up his Georges Richard-Brazier, Mr. Bowden will probably take his Mercedes, and a representative of Motor Age will accompany the party to see that no harm comes to any of its members.

## LONG NON-STOP RUN

S. F. Edge, who started last Saturday from London, England, in an endeavor to establish a 2,000 miles non-stop record, according to a cable, reached John-o'-Groat's, in the extreme north of Scotland, April 26. He traveled the 1,039 miles without a stop of the motor in 54 hours, an average of over 19 miles per hour.



## NUMBERING CASE COMPLEX

### City Hall Officials and Judiciary of Chicago Clash Over Licensing Authority, with Ordinance Enforced Against Some and Not Against Others—New Ordinance Likely

Chicago, April 26—Not only is Chicago as a city at sea in the matter of licensing, numbering and regulating automobiles, but the automobilists of Chicago as a class are somewhat at a loss to know exactly where they stand relative to the paternal hand. There have been so many apparently inconsistent moves since the origin of the now well-known Banker injunction case that the exact status of the local law is not commonly understood and many motorists think themselves freer from "regulation" than they really are. At present there are out of the 2,000 automobilists of Chicago only about twenty who are actually immune from arrest for not having licenses to operate automobiles, while there is only one man who needs have neither license nor number. This man is I. V. Edgerton, and the other twenty are Banker and a number of members of the Chicago Automobile Club who were party co-plaintiffs in a successful injunction suit in the licensing matter. The other automobilists of Chicago must just now be obedient to both the licensing and the numbering ordinances unless they individually or collectively seek by the injunction method to restrain the city from molesting them.

The story reaches back to June 30, 1902, when the city council passed an ordinance requiring automobilists to secure licenses to operate cars within the city limits. June 8, 1903, there came into existence the numbering ordinance, requiring automobilists to decorate their cars with their license numbers.

Banker opened the next chapter by reviving after several justices and daily papers had made some very unkind remarks about his style of automobile driving. His license to operate a car was revoked. He filed a bill for injunction restraining the city from interfering with him because of his failure to secure a license or in recognizing the other regulations of the licensing ordinance which covered such subjects as speed, lamps, etc. In February of this year, in the appellate court, the case was decided to the effect that the ordinance so far as speed regulations, etc., were concerned, was invalid, but that the city was not empowered to require a license. This decision allowed Banker to operate a car without having a license, but it did not affect the numbering situation.

About a month ago several members of the Chicago Automobile Club, through Attorney Gorham, now secretary of the club, filed a petition asking to be made parties co-plaintiff with Banker in the injunction, and the petition was granted. One of these men was I. V. Edgerton, who had never taken out a license. He was soon after arrested for not carrying a number. The numbering phase of the situation never having been passed upon in the courts, Edgerton and his legal and moral supporters called upon Health Commissioner Reynolds, who has nominal charge of these matters at the city hall, and asked him how Edgerton, not having a license, and not being required to have one, could secure a number. Dr. Reynolds replied that there was but one way and that was by way of the license route.

Then Edgerton filed in the superior court a bill for injunction restraining the city from enforcing him to have a number. The injunction was granted, and so far as Edgerton was concerned both the licensing requirement in the ordinance of 1902 and the number requirement of the ordinance of 1903 became null and void.

April 30 all licenses expire, and to prevent its members from being compelled to secure new licenses should the city continue to attempt to enforce this phase of automobile "regulation" it has through its attorney prepared to file on Monday, May 2, a petition asking that all members of the club be made parties co-plaintiff with Edgerton. It is probable that at this point in the proceedings the city will put up a stiff fight.

As the case now stands any one can probably be made a party to the injunction secured by Edgerton, but he is not exempt from obeying the licensing and numbering ordinances until he has successfully made such a petition. It is to secure this benefit for its members that the club seeks to have its membership secured by the one petition.

It is highly probable that the entire situation will be relieved by the drafting and passing of new ordinances. This possibility is based on the fact that a few days ago R. B. Mason and W. H. Arthur, assistants to Corporation Counsel Tolman, wrote to President Farson of the Chicago Automobile Club stating that among new ordinances about to be drafted for presentation to the city council would probably be one relative to the regulation of automobiles and asking that Mr. Farson confer with them relative to its provisions, especially concerning the advisability of raising the present speed limit of 8 miles an hour. This letter was presented to the directors of the club to day at their regular meeting and the president was directed to appoint a committee to confer with the corporation counsel's department.

At this meeting the directors met representatives from the Chicago Automobile Trade Association and discussed with them the matter of co-operation with the dealers and their customers in the injunction case.

The matter of the arrests of automobilists last Sunday in Evanston for exceeding the 8-mile speed limit of that suburb was also discussed and the attorney was instructed to take hold of this case in order to fight it on the grounds that a speed limit of 8 miles is absurd and unreasonable and that hence automobilists should not be required to keep within it. This will be a hard matter to handle, as it necessitates fighting the case on the grounds of equity rather than of law.

The question of the amalgamation of the American Automobile Association and the American Motor League was taken up and it was unanimously voted to give the Chicago Club's affirmation of the proposed merger.

With the more serious matters out of the way the directors discussed the summer campaign of entertainment and club doings generally and laid plans for Saturday afternoon runs for the entire season. These are mainly to be short

ones, although long runs will be sprinkled through the program of the summer to create an enthusiasm among club members for cross country driving.

Plans for the occupation of the recently leased club house of the Evanston Boat Club were taken up and it was decided to make this country house auxiliary one of the features of the club. The new acquisition is a commodious house with a swimming tank, large dance hall and other features of a well appointed club, and a steward will be placed in charge to have it always ready for members. This club house will be formally opened May 30. The directors also decided to hold some sort of a social entertainment at the Chicago club house some time within the next 2 weeks. The summer program of runs and social entertainment will be issued soon.

The proposed addition to the garage by the erection of an asbestos extension has been definitely settled and this work has already been started.

Twenty-six new members were elected and the membership committee reported that there were about eighty others on their lists who would probably join before the first of June. The membership of the club is now about 300.

In the matter of the handling the western end of the St. Louis tour in August, Representative Wheeler of the Motor Guide, a road book being issued covering routes in Indiana and Illinois, was given opportunity to present his plans for providing the maps, etc., for the South Bend-Chicago-St. Louis section of the big tour, and he was referred to Frank X. Mudd, the Chicago member of the A. A. A. St. Louis tour committee.

The suit for \$4,000 brought by Attorney W. A. Jennings to recover from the club fees for handling the Banker case was briefly discussed and, it being decided that Jennings did not have a ghost of a show to collect from the club, the case was turned over to Attorney Gorham.

### EDUCATING POLICE OFFICIALS

Newark, N. J., April 26—Automobile dealers of Newark are attempting to convert the city officials to automobilism. Last week C. S. Calvert in a Peerless, and L. J. Warth in an Autocar took Chief of Police Hopper, Captain McGrover, Charles Clark, president of the police commission, and Commissioners Dusenberry, Schiller and Fred Castle on a trip to Rahway. On the return trip the opportunity was embraced by the drivers to show how the cars could be handled. The officials expressed the utmost interest as the cars were speeded, quickly stopped, and as short turns were made to avoid wagons.

Bernard M. Shanley, the contractor, will retire as president of the New Jersey Automobile and Motor Club with the annual meeting to be held May 2. Frederick R. Pratt, also a contractor, will succeed Mr. Shanley, who will, however, be one of the directors of the club. Dr. James R. English has been nominated for vice-president and James C. Coleman will be elected as treasurer. With Mr. Shanley on the board of directors will be Angus Sinclair, of the Automobile Magazine, J. W. Mason and J. H. Wood. There are many members of the club awaiting 1904 machines, and when the members have been fitted out there will be a big club run to Staten Island and return to Newark. This run had been called for mid-April, but the failure of the members to receive their cars caused the postponement.

## GOOD FOR SMALL PLACE

### Over a Hundred Owners of Automobiles in Lowell, Mass.—Cars Now in Great Demand

Lowell, Mass., April 23.—Until within the last few days only 102 automobile licenses had been issued here to owners of cars. There are a half-dozen men who own two cars each and one man, Allan C. Sargent, has three automobiles. Only two women own motor cars, according to the license department list. One of the ladies operates an electric and the other a gasoline runabout.

The six dealers in town are Frank W. Chandler, Norton & Fuller, Ames R. Bliss, George W. Morrison, George H. Bachelder and William H. Greene. According to the dealers the trade is now at its highest state and more machines are being sold than the dealers are able to furnish from the stock on hand. "It is surprising," said one of the latter, "how great the demand is. Really remarkable when the price of a motor-car is taken into consideration. Who would have thought a year ago that there were so many people in town who had the means of spending from \$500 to \$3,000 for an automobile. I am sure that if the dealers had had any idea of such a great demand they would have arranged for three times the stock they have been keeping. It also shows that conditions, at least in this section of the state, are good, otherwise people would not venture in this luxury. Touring cars are all the go. They sell better than runabouts and a great many owners of the latter machines are disposing of them and buying the bigger machines."

Electric vehicles are much in use. Many owners claim they are easier to handle in the rougher parts of the country. Many new stations have been established in localities near Lowell where batteries can be re-charged. Herewith is a list of towns and the stations, also the time they are open. In Lowell—New England Motor Co., 24 hours; Morrison Auto Co., from 7 a. m. to 10 p. m. Fitchburg—Fitchburg Gas and Electric Co., 24 hours; Trer Johnson Sporting Goods Co., from 7 a. m. until 6 p. m., except Sunday. Natick—Edward L. Lackey, livery stable, 24 hours. Stoneham—C. M. Boyce & Son, 24 hours. Somerville—Somerville electrical light station, 24 hours. Cambridge—Cambridge Electric Light Co., from 6 a. m. to 7 p. m. Haverhill—Haverhill Electric Co., 24 hours, week days only. East Boston—62-64 Central square, 24 hours. Malden—Malden Electrical Co., 24 hours. Woburn—Woburn Light, Heat & Power Co., 24 hours. Chelsea—Chelsea Gas Light Co., 24 hours. Lawrence—Lawrence Gas Co., 24 hours. Wakefield—Municipal lighting plant, from 6 to 6 daily. Winchester—Dinsmore's stables, 24 hours.

### NEW OFFICERS FOR RUBBER COMPANY

Five new directors were elected at the annual meeting of the Rubber Goods Mfg. Co., held in New York: J. H. Cobb, of the New York Belting and Packing Co.; E. J. Coughlin, general factory manager of the Mechanical Rubber Co.; H. O. Smith, president of the G & J Tire Co.; William Seward, Jr., treasurer of the Hartford Rubber Works Co., and W. J. Courtney, railroad manager of the Peewee Rubber Co.; James B. Taylor, Lewis D. Parker, Milton S. Burrell and H. C. Winchester retired, while Henry Steers died. C. A.

Hunter, C. J. Butler, E. Hopkinson, Charles H. Dale, H. Keene, William T. Cole, Edward Lauterbach, A. L. Kelly, F. W. Eldy and T. J. Taylor were re-elected directors. Charles H. Dale was elected president of the board. E. Hopkinson, T. J. Taylor and C. A. Hunter vice presidents, Harry Keene secretary and treasurer, James McGufford assistant secretary and treasurer. The five first named officers and E. J. Coughlin and William Seward, Jr., form the executive committee.

The net balance for the year 1903 shows that there was \$17,553 to the credit of the company, compared with \$469,002 for business year ending in 1902. During the last year \$209,645 was expended for the maintenance of the plants, against \$149,576 during the preceding year. The annual report for the year ending March 31, 1904, shows a surplus of \$131,487, against \$25,322 for the 15 months of business ending March 31, 1903.

### WANTED HIS CERTIFICATE

One of the members of the Automobile Club of Buffalo, of Buffalo, N. Y., who is the pastor of a large and increasing flock, has written this letter to Secretary Fred J. Wagner:

Mr. Dear Mr. Wagner: Being aware of the fact that you are a man much occupied and with many duties to perform, I do not wish to trouble you in any way, but would just gently remind you that as yet I have not received my certificate of membership in the automobile club.

It is one of my pleasant duties to perform a great many marriage ceremonies during each year, and, as a rule, a few days after the ceremony, one of the contracting parties—generally the bride—very timely, and oftentimes blushing, calls at the rectory for a "certificate"—some even call it "testate"—just to have something to show that a priestly sanction gives their two hearts the right to be as one. Even so, it is with a sense of timidity that I beg you, as one of the executive officers of the great and illustrious Automobile Club of Buffalo, to give me something to show that your humble servant has the right, privilege and distinction to sail under the flag and wear the insignia of that splendid organization. Will you send me a membership card?

If it is needless to say that "Wag" made out the card in a hurry.

### ENGLISH NON-STOP CONDITIONS

The Automobile Club of Great Britain and Ireland has advised English manufacturers that it will vouch for long distance non-stop runs on the road under the following conditions: The run must be absolutely non-stop for both the motor and the car, the only stops admitted being for traffic purposes, when the motor may be stopped if the driver is called upon to do so, so that any stop, whether for tires or any other reason, will be considered as the end of the run. Trials must start from the automobile club or from the club house of an affiliated club, and information regarding the length of the run and the route over which the test is to be made must be given to the technical secretary of the automobile club at least a week before the date set for the test.

Accumulators or other parts may be changed and supply of fuel may be picked up and put in the tanks so long as neither the car nor the motor is stopped for the purpose.

A fee of \$5 will be charged for every 100 miles, with a minimum of \$25 for the purpose of paying the observer. An extra fee of \$15 will be charged for a run covering a distance up to 500 miles; \$25 if the distance is from 500 to 1,000 miles, and \$40 for a greater distance.

## NEW BADGER CONCERNS

### One Will Make New Steam Rotary Engines—A. D. Meiselbach Enters the Automobile Business.

The American Steam Motor Co., capitalized at \$400,000, has leased a building at Jackson and Huron streets, Milwaukee, and remodeling will begin very shortly. Machinery worth \$25,000 will be installed and business will probably be started about June 1. The following officers were recently elected: President, Frank X. Boden; first vice-president, John J. Jordan; second vice-president, Joseph M. Leller; third vice-president, Herman H. Nimmer; treasurer, Clark S. Matteson; secretary, Jesse E. Matteson; mechanical manager, Joseph Derfus; superintendent, H. Coudyner. The company will manufacture a steam rotary engine, which it is claimed to be the first successful engine of this type and is promised to afford a big saving of steam and power over both the reciprocating and turbine types of engine. The unique feature of the engine is that instead of having a stationary engine with a movable shaft, the engine in this machine rotates about a fixed shaft. This removes the necessity of a flywheel, inasmuch as the engine itself is set in a mammoth wheel. Instead of having only one or two cylinders it has eight, set on opposite sides of the fixed shaft. The entire construction of the engine requires only twenty-eight parts. A model engine has been constructed and it is reported, successfully tested.

The A. D. Meiselbach Motor Vehicle Co. was organized Saturday and articles of incorporation were filed in Madison, Wis. The capital is \$50,000 and work on the factory will begin at once. The incorporators are A. N. Miller, Fred D. Clinton and Byron B. Godfrey. The company will manufacture motor vehicles. Besides the McKaig patents, several others which Mr. Meiselbach owns will be used. The latter, while residing in Chicago, will keep the active management of the company. The name of A. D. Meiselbach is probably familiar to many people engaged in the automobile industry who were formerly in the bicycle trade, for Meiselbach was for many years head of the bicycle plant bearing his name and which he sold to the American Bicycle Co. some years ago.

### PROPOSED PATENT LAW CHANGES

Washington, D. C., April 25.—Automobile manufacturers are always interested in proposed changes in the patent laws, and for this reason the bill just introduced in congress by Representative Tawney to amend the present laws will be read with interest. The bill seeks to amend the laws so as to provide that where the patentee of any invention or discovery, the patent for which was granted within 17 years 9 months preceding the passage of the pending bill, shall desire an extension of his patent beyond the original term of his limitation, he shall be entitled to make application in writing to the commissioner of patents, stating his reasons for wishing to secure the extension. This application would have to be filed not more than 9 months nor less than 90 days before the expiration of the original term of the patent, and no extension could be granted after the expiration of the original term.

## BIG SAN FRANCISCO DEAL

### A Fifth of a Million Corporation Reaching Out for Business—Northwest Trade Improves

San Francisco, Cal., April 23.—The Pioneer Automobile Co., with its principal place of business in San Francisco, has recently increased its capitalization from \$100,000 to \$200,000 and has purchased the land on which its new building is situated at a valuation of \$65,000. The company has also purchased the business of the Oldsmobile Co. of Southern California, which embraces Los Angeles and all surrounding territory. The business in southern California will be in charge of John F. McLain, the present manager of the company at that point, and Leon T. Shettler, former manager of the Oldsmobile Co. of Los Angeles, will be employed as sales manager, having purchased a substantial interest in the Pioneer Automobile Co. Under this new arrangement the company will have the Pacific coast agency for the Winton, Oldsmobile, Locomobile, Stevens-Duryea, Georges Richard-Braiser and the Vehiele Equipment Co.'s electric trucks. The sales so far this season have been a great deal in excess of those of last year. Although the company has not as yet shown samples of the new Oldsmobile, it has received orders with deposits for forty-eight machines. Up to date seventeen more Winton cars have been sold than up to the corresponding period last year.

A few days ago the first 1904 four-cylinder Packard was received by the Pacific Motor Co. and is attracting considerable attention.

Three Stevens-Duryea cars were shipped to Oregon and several White steamers to Washington last week. Oscar Grothe, who is connected with the White Sewing Machine Co., returned a few days ago from a 4 weeks' journey north as far as Vancouver, B. C., and states that automobiling is booming in the northern states, especially in Portland, Ore.

The Stockton Automobile Co. will establish a Sunday morning automobile school and the working of each automobile will be demonstrated.

George W. Starr, manager and director of the Empire mine, and Dr. J. T. Jones, residents of Grass Valley, near Nevada City, Cal., contemplate making an 1,800-mile tour through the San Joaquin valley, and returning by way of the coast. They intend to run an average of 120 miles daily, and Mr. Starr will keep a record of what is happening by the hour. He will also take a camera with him and make many interesting snap shots. It will be the first trip of the kind ever attempted in California and will very likely be watched with interest by those who contemplate making long excursions.

### NEW YORK ROADS BAD

Syracuse, N. Y., April 25.—Country roads in all directions are in a condition that is anything but pleasing to automobilists, and under present circumstances none has ventured out. Even the plank roads are beyond use. Saturday the S. P. C. A. horse ambulance was sent to Cicero to get a horse which had been disabled because of the wretched state of the highway along the plank road. When the driver returned he said that the roads to the north were the worst he had ever seen. This coincides with statements made by many livermen. They say the roads about the city were never

worse. South of the city, near Onondaga Hill, and in such places snow has blown into the cuts and they are still covered. "If this weather continues a week or so the country roads may be dried into decent condition," said a farmer yesterday. "If it rains they will keep in wretched shape. Where toll is charged a man is a fool to pay it. He can cross the meadows nearly as well."

This condition does not prevail alone about Syracuse, but from Utica through to Rochester there is from 6 inches to 2 feet of the stickiest mud. As it is now, it is unsafe to drive horses over the roads hereabouts and certainly motorists can find no pleasure venturing outside of the city limits.

### "FRONT SEAT" BILL KILLED

Boston, April 23.—The Massachusetts legislature has been kind to automobilists this year, and as a result of the report of the committee on roads and bridges no automobile legislation can be enacted this season. There were two bills before the house, one calling for the abandonment of the so-called front-seat vehicle and the other reducing the speed of cars to 10 miles an hour throughout the state. Two hearings were given on these bills and then the committee went into executive session. The committee saw no reason to change the automobile laws, and unanimously reported to the house that leave to withdraw be given to each set of petitioners. The bills are now dead letters and for another year at least the automobilists of this section can operate under the present law.

### PARK CLUB AT HARTFORD

Hartford, Conn., April 25.—Plans are on foot for the merger of the two automobile clubs about to be formed and if present plans carry Hartford will be the center of automobile club interest in the state. Eighty names have been secured to organization papers of the Connecticut Automobile Club, and Messrs. Welch and Jones, owners of Charter Oak park, have offered a site just outside the park grounds for the new club. This will be a duplicate of the Connecticut building at the St. Louis exposition, which is a copy of the home of the late Lydia Sigourney, authoress. The building is two stories tall and has broad circling piazzas about. A large building formerly used in the park will be moved to a nearby site for the storage of automobiles. The park is but 2 miles removed from the center of the city on a main boulevard and has street car facilities. A preliminary meet is shortly to be held for the purpose of organization. The names secured include the most prominent motorists in the county.

It is proposed to receive persons from all over the county as active members and to receive motorists of the state as associate members. The club house will be erected at the expense of the owners of Charter Oak park and the profits of the automobile meets will be returned to the owners until the investment is paid for, and the club comes into ownership of the property.

An automobile show, the first one to be held in Hartford, is this week in progress, and is being largely attended at the Palace station, which is also celebrating its opening of an addition of large proportions. The cars for which the Darts, the owners of the station, are agents are being displayed, an orchestra supplies music, and the attendance is large.

## AUTOMOBILE INSURANCE

### Rhode Island Companies Making a Specialty of Covering All Kinds of Losses to Car Owners

Providence, R. I., April 25.—One of the features of the business in this city, which shows in a striking manner the effect that the automobile is having on all branches of mercantile activity, is the amount of automobile insurance that is being placed. In past years some attention was paid to automobile insurance by local agencies, but policies were given more as a favor than from any expectation of profit in the business, but this year such a large number of machines have come into this and other cities of Rhode Island that local companies are making a specialty of insuring machines against destruction by fire and also against theft. The first move a purchaser of an automobile makes is to take out a policy on his machine, and one company alone reports that it has issued policies at the rate of ten a week for more than a month. In Rhode Island the automobilists are taking out two policies, one called a "floater" and the other a liability policy, which covers the machine against accident. The first will cover all damage from fire at any place where the machine may be.

Last week the members of the Rhode Island Automobile Club had the pleasure of entertaining two of the most prominent members of the American Automobile Association, C. H. Gillette and Augustus Post, who described very minutely the plans that have been made for the tour to St. Louis. Mr. Gillette said that the American Automobile Association was very anxious to have the tour a complete success, and that it would mean more to the automobile industry than any organized effort that had previously been attempted.

Secretary of State Bennett has decided that the numbers to be placed on machines, in obedience to the new law, shall be white in color on a black background. Over the number, in small letters, shall be the words "Registered in Rhode Island," which will take the place of the initials of the state. There have been many applications for blank forms, from which the certificates are made out during the week, and already a hundred have been returned.

The Columbia garage, just at the rear of the Crown hotel, has a very unique arrangement by which the capacity of the place has been increased. Last year there was an office on a level with the floor; now H. H. Rice, the local agent for the Pope Mfg. Co., has had constructed a large office, which is suspended from the ceiling. Entrance is gained by means of a flight of stairs at the side. The office is so high that touring cars can be run under it.

### KNOX BUS LINE FOR PORTO RICO

New York, April 23.—C. H. Martin, who for some months has been making experimental trips with the idea of establishing automobile stage lines in Porto Rico, sailed on his return today. He took with him three 8-horsepower single cylinder Knox busses, having a capacity of eight passengers each. Mr. Martin will establish a bus line between Camuy and Aguadilla, which are the terminal of coast line railroads running from San Juan and Ponce. This connection will give a through line between the two cities.

The distance between Camuy and Aguadilla

is 26 miles. The road is a fine macadam, which will permit the run to be made in 2 hours. The present running time by stage directly across the island, a distance of 81 miles, is 15 hours. The run by railroad and automobile will be made in 12 hours, though the distance is 120 miles.

Mr. Martin on his last visit made thirty-four trips by Knox automobiles between Porto Rico and Ponce by the short cut road in an average running time of 6 hours. He says the road is a fine macadam, though over mountains all the way with a maximum rise of 1,600 feet in 3½ miles at Aibonito.

Two of the Knox buses will be in constant service, meeting every train at Camuy and Aguadillo. The third car will be kept in reserve. The fare will be \$3. Mr. Martin takes with him complete equipment for a machine and repair shop.

### DELIVERY WAGONS TOO FAST

Washington, D. C., April 23—Representative Wiley, of New Jersey, has complained to the police authorities of the unlawful speed attained by numerous bicycles and delivery wagons. He stated in his complaint that while the automobilists seemed to be held pretty well in hand by stringent regulations, cyclists and delivery wagon drivers seemed to have a reckless disregard for life and limb and should be hauled up with the same frequency that automobile drivers are. This complaint has led the superintendent of police to urge upon the district commissioners the necessity of a regulation requiring the delivery and business wagons in use throughout the city to be numbered the same as automobiles, so that the police and citizens, believing the drivers to be violating the speed laws, may make intelligent complaints concerning them. This suggestion meets with the approval of the automobilists, who have always maintained that they should not be singled out of all classes of vehicles to carry numbers. It is likely that the commissioners will take action in this matter in the near future.

### DEARTH OF MACHINES IN ST. LOUIS

St. Louis, Mo., April 26—The trade in St. Louis is far better than it was last year during the corresponding period. "We are swamped with orders," said a local dealer recently, "and don't know what we are going to do when the crowd of visitors begins to come. The condition is about the same with all the dealers and we cannot get a tenth the number of machines we need. The factory heads simply reply that they are doing all they can to have cars finished, but that they have other agents in the country besides St. Louis, and that they, too, are clamoring for more machines. The situation is embarrassing, much more for the dealer than for the manufacturer. The former, while agent for a certain car, must naturally boom that particular make, but what is the use when you can't promise deliveries for several months?"

"A large number of the cars sold are ordered by country people, who have the machines shipped to their home. There are quite a number of machines sold to people residing in St. Louis and who engage in the renting business for the duration of the exhibition."

According to the collector, ninety-six licenses were issued since April 1, and about 40 since the first of the year. It is estimated that there are nearly 650 owners of automobiles in the Missouri city.

## CAPITAL TRADE IS GOOD

### Most of the Dealers Report Inability to Make Deliveries Fast Enough to Suit All Customers

Washington, D. C., April 25—The automobile situation in Washington from a trade standpoint continues to be satisfactory. There is no denying the fact that lots of business is being done and the prediction made in this correspondence early in the year that the current year would be the best in the history of the trade bids fair to be realized.

As indicative of the business being done by the National Capital Automobile Co., it may be mentioned that it has on file sixty-two orders for Oldsmobile for immediate delivery, the major portion of which are for touring cars. This week marked the sale also of two \$2,500 and two \$4,000 Peerless cars. Mr. Hardwick, of the National Motor Vehicle Co., was here during the week and closed with the National Capital people to handle the National electric in this and adjacent territory.

W. J. Foss, manager of the Washington branch of the Pope Mfg. Co., has just returned from an extensive trip, embracing the Pope factories in Hagerstown, Md.; Toledo, O., and Hartford, Conn. While in Toledo he gave an additional order for ten Pope-Toledo touring cars, and at the Hartford factory he left orders for a big shipment of Pope-Hartford machines that are attracting much attention here. A carload of Cadillacs is on the way and is greatly needed to fill up gaps in the stock. Mr. Foss looks for good business from now on and is laying his plans accordingly.

The Baker Motor Vehicle Co. has opened a fine garage and salesroom at 1026 Connecticut avenue, where it is showing all the Baker models. The branch is under the management of Edward R. Alexander.

W. L. Edison has joined forces with A. Stanley Rice, son of the late Governor Rice, of Massachusetts, in the formation of the firm of Edison & Rice. They have secured a portion of the garage of the District of Columbia Automobile Co., on Connecticut avenue, and will handle the Mitchell car.

The National Electrical Supply Co., automobile supply jobbers, has won a case against the district. Two big automobile lamps owned by the company were returned to it by order of the court. These lamps were on a machine owned by J. M. Watson, who is now in jail awaiting trial on a charge of embezzling \$73,000 from the district government. The district attached the machine, together with the lamps, but the National Electrical company contended that as the lamps had not been paid for they rightfully belonged to it. The district will also have to pay the costs of the attachment.

### CHARGE CHAFFEURS WITH BLACKMAIL

British manufacturers are often subject to blackmail on the part of automobile drivers, and the evil has been growing so fast that stringent measures will very likely be taken by the automobile club to protect manufacturers. The scheme generally followed by the blackmailers is as follows: A driver is engaged by an employer who has just bought a new car, or in other instances a driver goes to a new place where he is intrusted with a particular make of car. The first thing he does is to get into communication with the

manufacturer of the automobile, explaining his new position and suggesting that a cash payment would not be refused or be out of place. Very often the kind request is granted, generally by smaller concerns. If the manufacturer does not give in, it is almost a certainty that shortly afterwards there will be something wrong with the car. Such attempts do not affect the well known firms, but it has placed many of the lesser known makers in embarrassing positions. It has been suggested that all the English manufacturers agree not to pay attention in future to such requests for money or any other favors and that the names of these unscrupulous drivers be referred to the automobile club, which will place them on the black list.

### N. A. A. M. INCORPORATED

There will be a general meeting of the members of the National Association of Automobile Manufacturers at the offices of the association, 7 East Forty-second street, New York, May 4, to vote on a resolution empowering the executive committee to wind up the affairs of the organization and make the necessary transfers whereby the newly incorporated association succeeds the old unincorporated body.

There will also be a general meeting of the members of the incorporated association, May 18, to vote on a resolution empowering the executive committee to assume the work of the new body and to transact the business of the incorporated association.

These measures are simply the final formalities in the matter of incorporating the N. A. A. M. in pursuance to a resolution passed at the annual meeting in New York, January 21.

### MOTORCYCLES POPULAR IN NEWARK

Newark, N. J., April 26—Percy Johnston, prominent as a cycle dealer, will on May 1 remove to 267 Halsey street, taking the garage formerly occupied by George W. Condon. Mr. Johnston will make up the storage and sale of automobiles along with his present line of bicycles and motorcycles. He handles Indian motorcycles, of which he has disposed of thirty-five this year to the people in and about Newark. People are taking actively to motorcycling and on South Eleventh street a considerable colony has been discovered, headed by Joe Nelson, the pace follower. Mr. Johnston has issued the entry blanks for the annual Irvington-Milburn road race Saturday and is working to make this event a success.

For \$3 a month an automobile may be maintained in good order. J. E. Crater, of the Central Automobile Co., has introduced the lump repair price in the management of his garage and is making it a success. The price is low, but it has been set after careful study on the part of Mr. Crater, who believes it will result in successful business. Broken parts, new tires and so on do not come under the agreement. Tire repairs, adjusting and ordinary repairs come under the head. Contracts are made for the work.

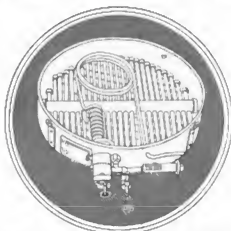
Autocars are brought to Newark over the roads by R. T. Newton, who goes after every car ordered and oftentimes takes the purchaser with him for his first taste of road work during the 126-mile trip. Mr. Newton finds the journey interesting and the purchasers find them instructive, as the 126 miles lead through all sorts of travelling and the experiences are all that they could desire. Just at present Mr. Newton is on the go most of the time, for Autocars are selling in Newark and vicinity.

# THE FIELD OF AUTOMOBILE DEVELOPMENT

## WALKER KEROSENE BURNER

The steam automobile boiler kerosene burner made by the E. C. Walker Co., of New Albany, Ind., is made of wrought iron tubes arranged in parallel series and screwed into the central gas chamber or manifold cross tube. They are spaced to accurately determine the air admitted between them so the air will pass upward in thin sheets and mix with the gas escaping from the hundreds of small perforations in the pipes, to produce a stiff blue flame. The perforations in the tubes are drilled in double rows at an angle of about 80 degrees, so that the gas issuing from these jets is not only forced to strike the air, but prevents a tendency to draft downward or back firing. The central chamber is proportioned to the size of the burner to equally distribute gas to all the lateral tubes. The mixing tube which enters the central chamber also similarly varies in size. The damper air regulator consists of sheet steel perforated plates so arranged that the top one may be shifted to change the registration of the holes to alter the amount of air that may pass through. The two plates are slightly separated so that even when the upper one is shifted to entirely close the holes a slight amount of air will be admitted to the combustion chamber. This construction is beneficial on windy days to prevent the strong wind from affecting the fire. The bottom plate is flanged on the edge to overlap the bottom edge of the fire box to form an air-tight joint. It is held in place by wing nuts to be readily removable.

The kerosene generating system is applied to the regular burners. Kerosene enters a coil of pipe above the burner. Through the small spiral portion of this coil the pilot flame passes, keeping it red hot. The pilot flame not only enters the fire-box, serving the double purpose of keeping preheating coil hot and lighting the main burner when it is turned on, but is carried back inside of the pilot house, where it comes in contact with the veined portion of this auxiliary generator. This generator is intended to overcome one of the most troublesome faults of some kerosene generators—the necessity of draining off wet, ungasified oil every time the burner is started, or in relighting the main burner after the carriage has been standing. It is said there is no condensation of gas in the pipes and that there is no carbonization noticeable, the carbon being reduced to a fine powder, which passes out of the nozzles. The nozzles are self-cleaning. The needle point of the valve



THE WALKER BURNER

stem passes through the pass orifice in the nozzle every time the valve is closed, hence tends to prevent these orifices from becoming clogged.

The burner outfit as regularly marketed will burn either kerosene or gasoline, or a mixture of the two.

## LEARNED TO WELD CAST IRON

What seems likely to practically revolutionize repair work in the various metals is an entirely new process which has just been perfected by a Milwaukee man named George Miller, and it is said to make it possible to weld cast iron, to braze aluminum and brass and to braze aluminum parts. With the assistance and backing of Chicago capitalists, Mr. Miller has formed a company to exploit his discovery, known as the Superior Brazing Compound Co., and capitalized at \$50,000. The company will have headquarters in Chicago, but a branch office will be opened in Milwaukee. Mr. Miller has been working with the idea of formulating such a process for several years, and has been experimenting along these lines, with varying success, until about 10 days ago, when he was able to bring the process to what he considers its perfection. The Miller process is of a chemical nature. The compound consists of seven ingredients, one of which disappears as soon as it is mixed with the others. Mr. Miller is now working on a process for tempering copper. This process is now a lost art, although it was known at one time to the Japanese. He has succeeded in tempering it to the thickness of an eighth of an inch, and has hopes of perfecting that process.

## A BLUE GRASS STEAM RACER

F. P. Scarce, Jr., of Lexington, Ky., is a steam car enthusiast and expects this summer to come out of the blue grass region with a steam racer with which to dispute track honors. The car he has designed is planned something on the order of the Ford-Cooper 999 in that it has a wood frame on wire wheels, semi-elliptic springs in front, no springs in the rear and propeller shaft and bevel gear drive.

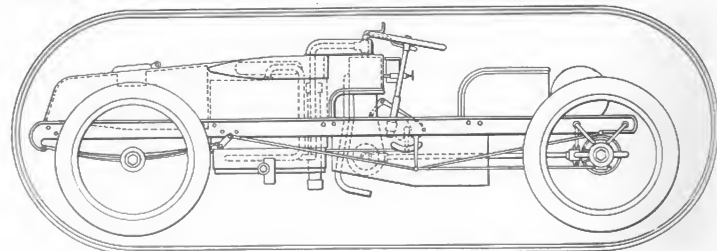
The wheel base is to be 8 feet, and the tread standard. The wire wheels will be 32 inches in diameter with 4-inch clincher tires. The wood side bars of the frame will be lined with steel flitch plates, will be braced in the corners and will be trussed with steel rods. Under a big hood on the front half of the frame will be the entire power plant. The water tank will be on the extreme nose of the bonnet and directly back of it will set the boiler, which will be of the ordinary fire tube style, fitted with stay tubes.

The fire flues will be bullet shaped and lie by the side of the bonnet. The boiler will have a kerosene burner with pilot light and a kerosene superheater, through which the steam pipe passes on its way to the engine, the pipe leading out of the top of the boiler down to the burner and thence upward to the engine. The latter is hung vertically back of the boiler and is to be of 12 horsepower. Its exhaust pipe extends directly downward to exhaust under the center of the car. The throttle and auxiliary throttle levers will be on top of the cylinder in convenient reach of the operator, the steering column and wheel being immediately back of the engine. The oiler will be on the back of the engine, and the reverse lever will be a pedal.

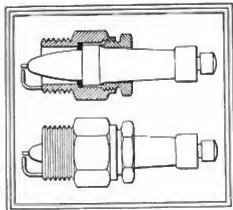
Power is to be transmitted to the propeller shaft by bevel gears and thence similarly to the differential on the solid rear axle, a well-braced journal box holding the shaft at this point. The combined kerosene and air tank will be back of the low-down seat.

## WASHABLE BATTERY CELLS

The Duntley washable storage battery cell, manufactured by the Chicago Storage Battery Co., 1241 State street, Chicago, is chiefly characterized by its accessibility and the manner in which accumulated sediment may be removed. It is not at all necessary to disconnect the lead connections of the cells, remove the cover and take out the grids, to the latter's



STEAM RACER DESIGNED BY F. P. SCARCE



T. G. I. SPARK PLUG

harm. In the cell is a bottom plug which may be removed by unscrewing a wing thumb nut, thus permitting the electrolyte to flow into any suitably provided receptacle. After the electrolyte has been strained to remove sediment, or has been allowed to stand long enough to allow the sediment to settle, it is ready for re-use. There is another screw plug in the top, after the removal of which a garden hose may be inserted and the cell washed out thoroughly. The bottom plug is then replaced, the filtered electrolyte poured back into the cell and the upper plug screwed into place. The cell is then ready for service. It is obvious that the grids are in no way disturbed and that the element of skill does not enter into the process of cleaning the cell. The cell is made in sizes and forms for the different uses to which storage batteries are put, and just now the company is introducing especially to the automobile trade, all the standard sizes being made.

#### T. G. I. SPARK PLUGS

The T. G. I. spark plug, made by Torhensen Gear, incorporated, of Bloomfield, N. J., has three main parts: the porcelain core surrounding the central electrode, the shell or body, and the coupling nut. The accompanying sectional drawing shows the form of these parts and the way they are assembled. A noticeable small feature is the composite gasket between the porcelain and its seat in the shell. A spring terminal clip is provided which renders the attachment of the terminal to the plug simply a matter of slipping the piece on and off without loosening or tightening of screws or binding posts. The plugs are furnished with either metric standard or  $\frac{1}{2}$  or  $\frac{3}{8}$ -inch O. P. threaded bodies and either plain finished or nickel plated. One style has platinum-iridium sparking points and another nickel alloy wire.

The company, in explaining its continued stand for porcelain insulation, says:

"The insulation has to withstand a pressure of many thousand volts; it is subjected to the most intense heat at one end and chilling draughts at the other and is expected to stand up and maintain its high insulating qualities and do reliable work, through violent changes in temperature, rain and moisture, or when covered with lubricating oil and soot, either of which conditions is enough to put a spark plug out of commission.

"Mica cores, built up of thin disks of sheet mica, even if carefully selected, are seldom free from iron, and the sheet mica cannot be so closely united as to entirely prevent a deposit of fine particles of carbon being pressed be-

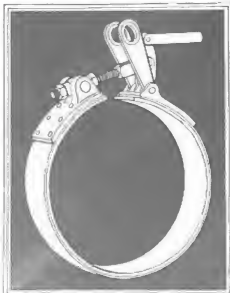
tween the layers by the force of the explosions, thus rendering the insulation imperfect. This causes mis-firing, and as the offending plug is to all appearances perfect, it often occasions the operator much annoyance to discover just where the fault lies. This also applies to other substances, such as lava or artificial stone, as they are porous, and for this reason imperfect insulators.

"There is only one substance which will resist a high pressure current under all conditions, and that is the fine dense imported porcelain, the material for making which is only found in certain parts of Europe. Porcelain made in this country of imported clay, and called imported porcelains, must not be confused with the genuine imported porcelain, as the art of manufacture and annealing has not yet been brought to that same state of perfection here as in Europe. The high-grade imported porcelains made for us are carefully annealed and treated so that the percentage of breakage is small. There is much less annoyance from broken porcelains than from faulty insulation due to deposits in mica or other substances, as, if a porcelain breaks, one is made aware of the fact at once and no time need be lost in hunting for the trouble elsewhere."

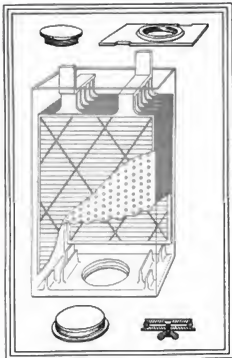
#### RAYMOND BRAKES

The Royal Equipment Co., of Bridgeport, Conn., in discussing the subject of double acting brakes, asserts that the efficiency of the Raymond brake is exceptional because of the fact that the end of the band receiving the strain of the car's momentum is connected to a fixed support, which prevents a counteracting pull coming on the operating lever and against which the driver of the car would be forced to exert his strength. It is claimed that it is only necessary for the operator to furnish enough pressure to bring the band to bear on the brake drum, so that when the revolving drum pulls on the band a wrapping effect is produced, which furnishes the necessary friction to bring the drum to a quick stop.

As this sudden stopping, however, is only occasionally necessary, the band is so formed that the amount of friction surface bearing on the drum depends on the distance which the hand or foot lever is moved, making it possible for the operator to apply the proper amount of friction to either stop the car suddenly, grad-



STANDARD RAYMOND BRAKE



DUNTLEY WASHABLE BATTERY CELL

ually or bring it down to any speed desired.

In the holding of the car when moving backwards, the brake depends upon an entirely different principle. When the band is tightened to the brake drum the latter gives the band a tendency to travel backward, carrying back with it the lower ends of the links which extend up to the fixed support. These links are made of a length to be wedged in between the fixed support and the brake drum. Thus a portion of the band is jammed down on the drum with a tremendous pressure, and when the operator tightens the brake the maximum amount, it is impossible for the drum to move.

The standard Raymond brake is illustrated. This may be attached to a drum on any part of the car and is made in various sizes, both respective to diameter and width. A special brake is also made with a clamp for securing the supporting links to a tube or other stationary member in cases where the construction does not permit of the direct attachment of the links. Special requirements will also be met, and various supporting brackets, drums, levers etc., supplement to the brake line.

#### RECENT INCORPORATIONS

New York—Touring Car Co., capital \$10,000. Automobile dealer. Incorporators: Charles K. Starr, Harry Roes and George W. Olvany.

New York—Jones Fan & Motor Co., capital \$2,500. Directors: C. D. Marsh, L. A. Lardau and James Jones.

Clason Point, N. Y.—Clason Point Automobile Co., capital \$1,000. Directors: W. E. Wells, W. H. McBrien and E. F. Clark.

Detroit, Mich.—The Rapid Motor Vehicle Co., capital \$13,000. To manufacture automobiles. Incorporators: Barney Finn, Albert Marx and Max Grabowski.

New York—St. John Rubber Tire Co., capital \$9,000. Directors: Benjamin M. Moore, E. W. Morrow and H. N. St. John.

Chicago—Auto-Car Equipment Co., capital \$6,000. To manufacture engines. Incorporators: R. W. Judson, Lucie J. Tobin and A. W. Tobin.



## RESULTS OF MONACO MEET



MOTOR AGE.

Monte Carlo, Monaco, April 15—While a visitor here during the motor boat races, Mr. Jellinek, of the Daimler Motoren Gesellschaft, was asked to express an opinion concerning the trade. He said among other things, "Most of the builders of motor boats are putting too powerful motors in their craft. They put an immense engine in a relatively small boat and it can be noticed that in several cases there is hardly room for the poor engineers to move around."

"I don't see where the practical side is in such boats. If such a boat goes even as fast as a torpedo boat it does not mean that it is practical; in fact, I hardly think so, inasmuch as there is constant danger of accident. The aim in the construction of motor boats should be in making fast, safe boats, which may carry a certain number of passengers. I am especially concerned as to the carrying of passengers, which seems to be very little considered by the manufacturers."

"Mr. Chevreux, a well-known French boat builder, is now working on a design for a 500 horsepower motor boat for a European king well known as an automobilist. This motor will be a novelty, and the only information I may give about it is that it will have six cylinders and will consume only about one quarter the quantity of fuel, which the average motor boats use at present. Notwithstanding the great power it will be very economical when compared with other boats."

Asked what he thought about the speed of motor boats, Mr. Jellinek said: "I am quite sure that within a few years motor boats will be built which will be speedier than our fast automobiles. It is true some have claimed the power of resistance of the water is so great that it will not be possible to make boats to go so fast as motor cars. Well, the same argument was used for years in the discussion as to the probable limit of speed of ocean greyhounds; they tried to demonstrate with figures that they would not be able to travel faster than 19 miles per hour. At present some have shown a speed of nearly 27 miles. So you can draw your own conclusions as to the possibilities for speed in motor boats."

Trefle-a-Quatre, the holder of the world's record for 100 kilometers, as well as for the best average of miles during a given number of hours, belongs to Georges Richard-Brazier, of Paris. It is about 33 feet long and 59 inches wide. It has a four-cylinder 80-horsepower Georges Richard-Brazier motor and has developed a speed of 24 1/4 miles in special trials. Its cylinder capacity is 694 cubic inches.

Rapee III was built by Telier & Son, who also built Rapee II, Princess Elizabeth, Yitun II, and several other of the fastest French motor boats. This particular craft is only a trifle over 26 feet long, 47 inches wide and

is fitted with a 24-horsepower Panhard motor having a cylinder capacity of 439 cubic inches. The boat belongs to its builders, Lutece, which won l'Auto cup last year and proved the most dangerous competitor for Mercedes, is a 49-foot racer, 67 inches wide and with a 70-horsepower Panhard motor, having a cylinder capacity of 844 cubic inches. It belongs to the Telliers, who built it.

Mercedes belongs to C. L. Charley, is 33 feet long and about 50 inches wide. The builder of the hull is Lein and it has a four-cylinder 80-horsepower Mercedes motor. Usona II is an American motor boat, built by the Matthews Boat Co., of Pascom, O. It is 32 feet long and has a Lozier motor with a cylinder capacity of 277 cubic inches. Le Nogantais belongs to M. Callois, is 26 feet long and has four-cylinder Darraq motor with a cylinder capacity of 213 cubic inches.

Of the total of \$20,200 cash prizes given during the Monaco motor boat races, Trefle-a-Quatre won the largest individual amount, \$3,480. It was also given the \$1,000 offered by the Prince of Monaco. Lutece was second on the list, with \$2,000, and the Peugeot boats won prizes to the value of \$1,720; Princess Elizabeth, \$1,600; Rapee III, \$1,480; Mercedes \$880. As builders of the motor, Panhard & Levasseur were given \$400, Delahaye \$420, Georges Richard-Brazier \$348, Peugeot \$172. Telier, the hull builder, received nearly \$4,000, of which amount Trefle-a-Quatre earned him the largest part, \$600. Thornycroft, the manufacturer of the screw propeller of the Trefle-a-Quatre, was given \$200. A great many medals were also offered.

## BUFFALO BOAT ENTERED

Philip Perew, of Tonawanda, N. Y., will probably enter his motor boat in interstate gasoline motor boat race, which is to be run Decoration day on the Hudson. The Buffalo, which is the boat's name, is 29 feet 10 inches long, has a 26-inch beam and draws 3 1/2 feet of water. She has a 6 1/2-horsepower gasoline motor, made by the Buffalo Gasoline Engine & Motor Co.



MOTOR AGE.

LUTECE  
LE NOGANTAIS  
MERCEDESLA RAPEE III  
TREFLE-A-QUATRE  
USONA II

# MOTOR COOLING SYSTEMS TESTED

**T**HE capacity of a radiator to cool is fixed, depending upon the amount of radiating surface that it presents to the air. The capacity of a motor to heat is the variable matter. Every designer of a gasoline motor knows that a long red flame in explosion is a bad condition for heating, and that a motor with a small exhaust port, and consequently holding-in of the hot gases—back-pressure so-called—is apt to heat badly. He knows that thick walls, both of the explosion chamber and the water jacket, will also retain heat; in fact, he knows that speed, compression, exhaust, mixture, exposure or position, and several other characteristics all have important bearing on the heating capacity of an explosion motor.

For the purpose of adding to the knowledge on this subject, an apparatus to test coolers was installed, and a series of tests were made, which, while made with extreme care, were limited by the conditions governing them, and the motor builder should bear these conditions in mind if he uses them for a basis for figuring out his own requirements. He must add or subtract what may be necessary when he compares with the conditions that confront him.

A 4½ by 6-inch single-cylinder motor, of the ordinary four-cycle type, was used to make the first of these tests, and is the basis from which the figures were taken, it being concluded that the results could be used as data with which to make comparisons for the larger sizes of motors. A jack shaft was connected to the motor corresponding to the rear axle. To this jack shaft was connected a fan through an intermediate counter shaft. This was done by the means of cone pulleys, in order that the speed of the fan could be varied. A pump of the ordinary positive or geared type was directly connected to the motor, so that it would at all times travel at the same speed. This pump had a capacity of 2 gallons per minute, with the engine running at 500 revolutions.

Mounted alongside of the engine was a box or tube, constructed of sheet iron, set into one end of which was a 21-inch A B C disk fan which was actuated by a jack shaft, the air thereby being drawn through the cooler and tube or box. A fifty-light dynamo was also connected with the jack shaft in order to provide for the steady running of the motor, the lamp board being so constructed that the load could be varied by throwing lamps in or out. The front end of the sheet iron box or tube was brought to a square in such dimensions as would take in the largest cooler to be tested, and shutters were provided to close in around the cooler so that the entire volume of air induced by the blower would be drawn through the cooler.

The cooler to be tested was connected by the usual piping to the water tanks and the engine jacket. At or near the inlet and outlet of the radiator were attached feed water thermometers which showed the temperature of the water as it came from the water jacket and again after it had passed through the cooler. Thermometers were also provided to take the temperature of the air before it entered and after it had passed through the cooler. The whole apparatus was so arranged it was thought, as to approximate as closely as possible actual road conditions.

The first series of tests consisted of taking five different sets of tubes, in reality five different coolers, containing respectively, two, four, eight, ten and twelve copper tubes of ¾-inch outside diameter, each tube being 24 inches in length over all, and all put together with copper return leads of the same tubing. The two and four tubes were but one row in depth, while the eight, ten and twelve tube sections were two rows deep. The tubes were No. 22 B. & S. gauge, and each tube was entirely covered with 1½-inch outside diameter copper fins or gills, spaced so as to give thirty-eight to the foot.

Water was taken in average temperature of 80 degrees Fahrenheit, and the following results were obtained:

Number tubes.	Length tubing.	Velocity		miles per hour.	miles per minute.
		Average max. of tubes.	min. temp. of tubes.		
2	4 ft.	220°	20	25	25
4	8 ft.	210°	20	37	37
8	16 ft.	164°	20	25	25
10	20 ft.	150°	20	39	39
12	24 ft.	148°	20	27	27

In order that a basis might be established by which a rule could be made, the capacity for the radiation of heat as shown by the tests of the above coolers was taken as a basis, and it was found that, at 20 miles per hour, it was necessary to use 16 feet of ¾-inch copper tubing, covered with 1½-inch copper disks, the cooler to be mounted so that half the tubes would have front air exposure, in order to hold the water at a satisfactory working temperature—between 160 and 180 degrees—on the motor used. The average temperature on entering air was 75 degrees Fahrenheit.

It will be noted that the eight-tube cooler held the water down to 164 degrees Fahrenheit, at which temperature it remained after 37 minutes' run, and subsequent running at same speed and load failed to raise above this. A measurement of the cylinder of this engine showed that it contained 76 square inches of heated surface, taking the cylinder wall under the water jacket casting as a basis for the measurement, and including the area of that part of the head which was water jacketed.

It therefore took to cool this 76 square inches of heated surface 16 feet of cooler as described, which contained 182 square inches of radiation to each foot in length, measuring the superficial area of the tubing and the fins. Therefore the entire length of tubing taken, 16 feet, equals a total of 2,912 square inches to cool 76 square inches of heated surface in the motor cylinder, or 38 square inches of radiation to each square inch of heated surface, at 20 miles per hour.

Other results were deduced from the readings obtained with the apparatus. Similar temperature readings of the water entering the cooler were taken from the tests of the several sizes of coolers, and these readings were plotted as temperature curves, showing the relationship between the number of tubes in the cooler and the number of heat units radiated per hour at the different temperatures.

A diagram of these tests is given in Fig. 1 and shows the heat units—British thermal units—radiated per 24-inch lengths of copper tubing arranged as described. From the total

cooling area of metal for this construction of cooler of 182 square inches of surface per foot of tubing one can figure the number of heat units per square foot of cooling surface for any shape of tubular radiator covered by the curves. A heat unit is the quantity of heat required to raise the temperature of a pound of water 1 degree Fahrenheit. Some such unit of measurement seems desirable because a reduction in temperature of a certain number of degrees means nothing in determining the size of a cooler unless the rate of circulation of water is given.

Each curve in Fig. 1 is marked in degrees Fahrenheit, showing the temperature at which the water from the engine jacket enters the cooler. The water circulation is at the rate of about 2 gallons per minute. The series of curves show to what extent the efficiency of different sizes of coolers is increased as the temperature of the inflowing water is raised. A cooler having 48 inches total length of tubing and receiving its hot water from the engine at a temperature of 150 degrees will radiate about 25,600 heat units per hour, with an approximate speed of 20 miles per hour. If the size of the cooler be doubled by connecting two tubes to it and the other conditions are kept the same, it will then radiate about 32,300 heat units per hour, or an increase of 25 per cent. Suppose, however, that the water is pumped to the cooler at 210 degrees, the smaller size will radiate 44,500, and the larger size, containing 8 feet, will radiate 6,300 heat units, this increase being over 40 per cent.

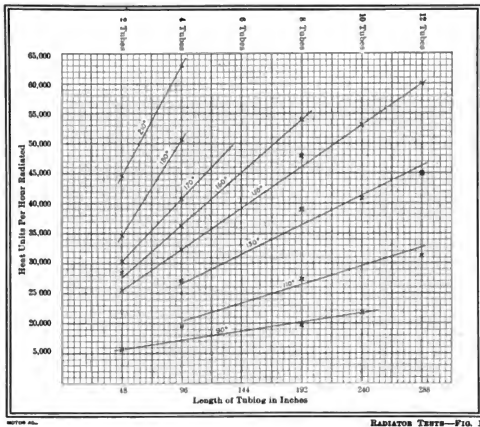
The tests summarize into the rule that with an air velocity of 20 miles per hour, 38 square inches of radiation in a tubular type radiator are necessary to cool 1 square inch of heated surface of the motor cylinder, with the pump delivering water to the radiator at a rate approximately of 2 gallons per minute, and with the temperature of the air as it would be on an average summer's day, and the speed 20 miles per hour.

In order to arrive at results from slower speeds, another series of tests were made, results of which are shown by the curves in Fig. 2, which show the relationship between the amount of radiation from an eighteen and a twelve-tube cooler, of the same length of tubes as described above, when the same amount of water at the same temperature is pumped through each. This is shown within the range of automobile speed of from 8 to 25 miles per hour. The efficiency of the cooler is, of course, dependent upon the surrounding temperature. These experiments are intended to represent average conditions of service; therefore, the air was drawn through the cooler at a constant temperature, warm but not hot.

The curves show how much more the water is cooled, in both a small and a large cooler, as the speed of the automobile, and consequently of the pump, is increased. This is as might be expected, as the cooler, passing rapidly through the air on an automobile, is acting under the conditions of an indirect hot water heater in a blower system, and elaborate tests with heating and ventilating engines have shown the improved efficiency of such heaters when the velocity of the air from the blower is increased.

When running at the comparatively high speed of 25 miles per hour, the curves indicate that the larger and the smaller tubular cooler.

**EDITOR'S NOTE.**—This article is the result of tests made under the supervision of William S. Conant, M. E., and Benjamin Briscoe, of the Briscoe Mfg. Co.



RADIATOR TESTS—FIG. 1

set up with the same hood, radiate practically the same amount of heat. At lower speeds, the larger cooler, however, shows its greater capacity for heat radiation and the consequent cooling of the jacket water.

When running at 8 miles per hour, the eighteen-tube cooler radiates more than twice as many heat units as the twelve-tube cooler. The action of the cooler under low speeds, with any given motor outfit, is evidently that which must determine its size.

The ideal conditions will be fulfilled when the size of tank and cooler on an automobile are such that the engine may be left running for an indefinite time while the machine is standing still on a hot day. To meet this condition it is but necessary to provide a circulating pump which, when pumping at the speed corresponding to the free running engine speed, will deliver the proper number of gallons per minute to keep the engine cylinder at a safe temperature. The temperature of the water pumped to the cylinder for such a determination should of course be about that found in service, or between 100 and 150 degrees Fahrenheit. If the cooler will keep the water from boiling under these conditions of rest, it will prove sufficient under any load. The air circulation when the machine is in motion will more than offset any increase of temperature in the cylinder.

In order to get a cooler which will keep the water at a temperature below the boiling point while the automobile is at rest but with the engine turning, it is of utmost importance to so place the cooler that it will have free upward circulation of air. Here again something can be learned from previous work on heating tests. The radiation from a direct steam coil, of the ordinary cast iron form, in still air, is diminished about 20 per cent when a flat board is laid over it so as to cover the top, although the four sides are left open.

An examination of the curves in Fig. 2 show that at the different rates of speed a twelve-

tube cooler will radiate heat units as follows:

25 miles per hour.....	90,000 heat units
20 miles per hour.....	70,000 heat units
15 miles per hour.....	49,000 heat units
10 miles per hour.....	25,500 heat units
8 miles per hour.....	17,000 heat units

Analyzing the above figures, it will be noted that a speed of 8 miles per hour will result in a radiator's having about one-fourth of the capacity that it would have at a speed of 20 miles per hour, thus proving that even in ordinary speeds and with pumps circulating to correspond with this, the capacity for radiation does not increase in direct proportion to the speed of the machine, but greatly exceeds it. It will be noted, moreover, in comparing the eighteen-tube curve, that the size of a cooler as it increases, gives a greater ratio of increase in its capacity for radiation than its larger size would demand.

Thus the tests show that an increase in the size of a radiator of 50 per cent would result in an increase of its capacity for radiation of over 100 per cent, at a speed of 8 miles per hour. Subsequent tests show farther that when standing still a still greater difference will be manifested.

According to the first rule a cooler traveling at a rate of 20 miles per hour must have 38 square inches of radiation to 1 inch of heated surface of the motor cylinder. It would of course be unsafe for a manufacturer of automobiles to design his cooler, based on a speed of 20 miles per hour; neither should it be expected that he would equip with a cooler that would be large enough to hold to a safe working temperature when the automobile was standing still, but the motor turning.

It would be reasonable, therefore, to select some intermediate speed, such as might be considered practical for the particular machine; for should a cooler be efficient to hold the water to a proper temperature at such a speed, at higher speeds it would take care of itself, and the risk of evaporation at slower speeds

would be slight, as the times that the automobile would travel its slower speeds would be comparatively infrequent, and the probability is that higher speeds would follow alternately with low speeds, and therefore the increased efficiency at the high speeds would compensate for the decreased efficiency at the low speeds.

In order to provide for slower speeds, a careful analysis has been made of the tests taken, and it was found that the following amendment to the first rule will prove approximately correct to use for the average motor, the amendment being that for each mile less than 20 the automobile shall be intended to run—figured as its average working speed—it will be necessary to add 3 square inches of radiation to that given in the rule.

Supposing that a designer of automobiles should determine that his cooler ought to have a capacity sufficient to hold the water to a safe working temperature no higher than 180 degrees, with his machine running at 10 miles per hour, he can calculate for his cooler by adding 3 square inches of radiation for every mile less than 20, which in this case would be 10 miles or 30 square inches, to the figure already given as satisfactory at 20 miles per hour, 38 square inches. Therefore, 38 plus 30, or 68 square inches, would be sufficient to cool 1 square inch of heated cylinder surface at 10 miles per hour.

To reduce this to lineal measurement of a  $\frac{1}{4}$ -inch tubular cooler, provided such cooler is made up with  $\frac{1}{4}$ -inch copper fins, spaced thirty-eight to the foot, it will be found that  $\frac{68}{182}$  of a foot would give approximately  $\frac{4}{11}$  lineal inches. To again reduce this to the amount required for any given cylinder, the total square inches of heated surface of the cylinder may be multiplied by this amount, which in the case of the motor used in making tests would give approximately 28 feet. To prove this deduction, tests were made, using this quantity of tubing, and in no case with any combination of speeds, mixture or load could the water be raised as it came from the cylinder to over 178 degrees under the most adverse circumstances.

A series of tests were made in order to compare the relative efficiency of copper and tin fins; also of fins soldered to tubes or not; of coolers coated with lamp black paint, or not so coated. These tests have been condensed into percentages with the following results:

A radiator with copper fins, painted and soldered, is the most efficient and, as will be noted by curves in Fig. 2, dissipates 70,000 heat units per hour at a speed of 20 miles per hour for a twelve-tube cooler. In order to condense the net results, let this combination be 100 per cent, and the following table is obtained:

Copper tubes copper fins, soldered and coated.....	100
Copper tubes copper fins, not soldered but coated.....	79
Copper tubes copper fins, not soldered and not coated.....	52
Copper tubes tin fins, soldered and coated.....	58

It will be noted that tin fins soldered to the tubes and coated are more efficient than copper fins not coated and not soldered. It was further discovered that the efficiency of a radiator is materially increased by coating with black and tests in this manner have also shown that a radiator can be coated with a dull lamp black paint or varnish up to as many as fourteen coats, and its efficiency will be slightly increased each coat. After that there is a diminishing in the efficiency. In practice, however, it is not found advantageous to dip them more

than twice; one of the reasons being that the paint or varnish will adhere when given two coats better than when a greater number is given. It is essential, therefore, in any cooler to solder the fins to the tubes, thereby securing good conduction by its continuity. Also by coating the cooler black, thereby securing the greater radiating efficiency of a black surface for radiation; and thus by both of these operations aiding the other element which enters into the efficiency of radiators, that of convection.

By convection is meant a transfer or the carrying away of the heat in a fluid mass, either of the air or of a liquid by means of the motion of the particles of that mass. Experiments made by others in order to ascertain some facts in reference to the transmission of heat have always proven that the rate of cooling by transmission of heat through metallic surfaces depends largely upon the rate of circulation of the cooling medium over the surface to be cooled.

A tube filled with hot water and moved by rapid rotation at the rate of 69 feet per second through the air in an experiment told in Kent's Engineers' Pocket Book, lost as much heat in 1 minute as it did in still air in 12 minutes. In water at a velocity of 3 feet per second, as much heat was abstracted in half a minute as was abstracted in 1 minute when it was at rest in the water. It was found by Mr. Craddock, who made these tests, that the circulation of the cooling fluid became of the greatest importance as the difference in temperature on two sides of the plate became less. The results obtained by Peclet in reference to the loss due to direct radiation of different materials is as follows:

Red copper .....	0.16
Tin .....	0.21
Zinc .....	0.24
Polished brass .....	0.25
Polished silver .....	0.43
Polished sheet iron .....	0.45
Sheet lead .....	0.65
Ordinary sheet iron .....	2.77
Cast iron, new .....	3.17
Rusty sheet iron .....	3.36
Rust .....	4.01

The results as obtained above conclusively show, for instance, why the element of radiation is better served by coating red copper with a soot or lamp black paint, as the radiation of soot or lamp black is, as above noted, about twenty-five times that of copper. This does not apply, of course, to conductivity, which is another one of the important elements to be considered in coolers for automobiles. Conductivity of heat, through and by the different metals is as follows, taking silver, the best conductor, at 100:

Silver .....	100	Copper .....	74
Brass .....	24	Tin .....	15
Iron .....	12	German silver .....	6

This, therefore, conclusively shows why copper is the best material to use in radiators to serve the necessary element of conduction, silver being too expensive.

These conductivity figures do not mean as much, however, in the automobile cooler problem as they would seem to imply, because of the element of convection which also enters into it, which, as has been stated, implies the transfer of heat by the air surrounding the cooler, and as is demonstrated in the experiments of Mr. Craddock, convection depends on motion, it was attempted to work this out in the experiments and tests whereby the heat units extracted at various speeds, and the deductions therefrom resulted.

It will be noted that all experiments heretofore noted in this article have been made with tubular coolers. Tests were made with various types of honeycomb coolers, and the results obtained show an efficiency no greater than the tubular type in proportion to the amount of radiation or surface exposed to the air, provided the tubes were  $\frac{1}{2}$ -inch or less, and so arranged that the area of the water channel resulted in practically the same speed of the water through the cooler. This refers to the drop in temperature; that is, difference in the water in and out, but a further discovery was made, that the efficiency of the honeycomb cooler depended largely upon the rapid passing of water through it, it having to pass through oftener in a given length of time than through a tubular radiator in order to be as efficient.

A trial of honeycomb coolers should prove that if a tubular cooler is made with an area of capacity of water channel corresponding to a given type of honeycomb cooler, the efficiency of both will be practically the same.

### MOTORING MELANGE

Oldfield is once more driver of the Bulletin. Little bit of advertising, anyway.

An English motor-bicycle driver completed a 300-mile journey at an average of 16 miles per hour, and at a total expense of \$2.02.

At a session of the board of aldermen of Macon, Ga., held last week, the city ordinance limiting the speed of automobiles in the city's thoroughfares at 8 miles an hour was adopted.

A motor car line between Farwell and Broken Bow, Neb., and passing through Sargent, is being established. The round trip will be about 200 miles and three buses will be used in the service at first.

An Iowa paper makes note that the town will have four automobiles and gives assurance that they will be for sale shortly. The local authorities must be planning a 6-mile speed law to squelch the game in its infancy.

St. Petersburg, Russia, is in need of good mechanics, according to a note in a Paris triad, which says that French mechanics are at a premium and that some have been engaged at salaries of from \$40 to \$75 per month—big money in Russia.

The publisher of the Cleveland directory of automobile owners recommends it on the ground that by its aid a person may be able to identify his motoring friend who nods

pleasantly as he flies by. The average man seeking to identify a motorist is not after the one who merely nods a greeting to him.

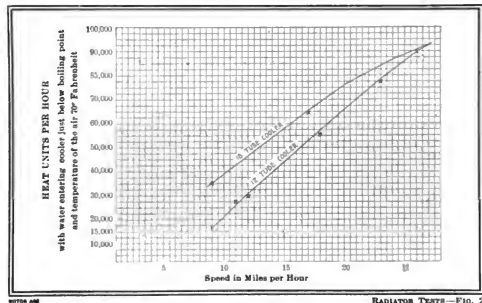
The garage in which the automobiles belonging to the postal and telegraph department of St. Petersburg, Russia, were kept was destroyed by fire recently, and all the motor vehicles were burned. There were thirteen 6-horsepower cars valued at \$800 each, and four large vans costing \$1,800 each. The postal service was badly crippled for several days.

The motor bus service in Eastbourne, England, has netted the small profit of \$321 during the few months it was in operation last year, when the service was commenced. Two hundred and ninety-four thousand nine hundred and twenty-two passengers were carried and 36,800 miles run at a cost of a little less than 26 cents per car-mile. The cost per car for each week was \$83.70.

The driver of an automobile was recently summoned before a magistrate of a suburb of Brussels, Belgium, for having on his car a lamp with opaline glass. The magistrate acquitted the driver on the ground that the regulation was illegal, because the latter simply required that cars should have a number in front and one in the rear, illuminated by a lamp, but of no particular kind.

While in Nice, France, Mr. Jellinek stated that the Cannstadt works of the Mercedes company were only being used for finishing bodies, starting finished cars, and for offices. Practically all the cars are now made at the Unter-Turkey factory, located 4 miles from Cannstadt. That part of the factory in the latter locality, which was destroyed by fire last June, has not been rebuilt, and very likely will not be. Near Berlin the Daimler company has another factory where lorry motors and motor boats are being constructed.

The Central New York Garage Co., of Syracuse, N. Y., is now established in the quarters formerly occupied by the Syracuse Automobile Co. at 346 South Warren street. In quarter-page advertisements in the Sunday papers the company invited an inspection of the Buckmobile, a 15-horsepower car for two or four passengers at \$1,200; and in another advertisement the Northern runabout and touring car and the Queen. The runabouts are being offered at \$750 and the touring cars at \$1,500. Motor boats are being offered at \$100 and up-



## FROM THE FOUR WINDS



MAYOR MCCLELLAN, OF NEW YORK, IN HIS DUESENBERG

The Knoxville Automobile Club, Knoxville, Tenn., was organized last week. There are twenty-seven charter members and the following officers were named: President, Cowan Rodgers; first vice-president, Major C. H. Hudson; second vice-president, Dr. J. H. Kelso; secretary-treasurer, Henry Howard; executive committee, Ralph Rodgers, Dr. W. R. Cochrane, William Ross, S. V. Chandler and three officers. The new organization intends to work especially in the direction of obtaining better roads in Knox county. To belong to the club prospective members must reside in Knox county and possess automobiles.

It is again reported that an exclusive millionaire's automobile club will be formed in Newport, R. I. An eastern paper says that it will be a most difficult matter to be admitted as a member unless the candidate really can show that he possesses at least a million.

The Indiana Automobile Association is arranging an automobile meeting to be held Decoration day in Indianapolis. It is reported that Earl Kiser, Carl Fisher, Tom Cooper and Eddie Bald have been engaged for different events.

The Hammer-Sommer Auto Carriage Co., of Detroit, Mich., has filed a notice of dissolution. The notice is signed by Henry F. Hammer, William J. Sommer and Herman A. Sommer.

Of the total number of 3,900 automobiles which it is claimed have been registered in Massachusetts, thirty are owned by Holyoke owners.

Automobilists of Knoxville, Tenn., are planning to hold an automobile race meet in the near future. Costly prizes will be offered.

Rumor has it that northern capitalists have recently decided to spend \$250,000 in erecting an automobile factory in Nashville, Tenn.

P. L. Murray, of Bloomington, Ill., has opened an automobile and bicycle repair shop at Main and Locust streets.

The Newark Automobile Co., Newark, N. J., has taken the agency for the Michigan. The

Motor Car Co. handles the Cadillac in Newark and vicinity.

An automobile club has been formed in Canton, O., and a club is being talked about in New Haven, Conn.

There are about twenty owners of motor cars in Watertown, N. Y., among which it is said that five are physicians.

Twenty-two automobilists of Ottumwa, Ia., formed the Ottumwa Automobile Club last week. J. F. Kerfoot was elected president, W. E. Hunter vice-president, and A. C. Lee secretary-treasurer.

Some dealers in Detroit, Mich., are reported to have sold so many cars which they are expecting from manufacturers that they prefer not to take any further orders, not being able to make promises as to the delivery time.

At the recent meeting of the Automobile Club of Bloomington, Ill., the question of enforcement of the city ordinances relating to the leaving of unhitched animals on the streets was discussed and the public is to be advised to obviate the nuisance.

An eastern automobile manufacturer who recently visited Chattanooga, Tenn., is reported to have said to a newspaper man in that city that he considered the town as one of the best located to become an important automobile manufacturing center.

An ordinance regulating motor vehicles in Ottumwa, Ia., was read before the city council last week. It provides that all motor vehicles must be registered with the city and carry numbers which shall be visible day and night. In the business district the speed must not exceed 6 miles per hour, in the residence section 8 miles, while at corners the speed must

not be more than 3 miles per hour. In turning a corner the machine must execute a wide circle and pass to the farther side of the street turned upon. In approaching a team, if the latter becomes frightened, the machine must be brought to a stop, and if the frightened team is in front of the automobile the latter must remain behind or turn upon a side street. Cars must carry either a bell, gong or horn. Violators of the ordinance will be subject to a fine of not over \$100 or imprisonment for over 30 days.

A newspaper of Muskegon, Mich., reports that an exciting race between George Thomas, formally of Muskegon, and one Jackson, the latter, took place last Saturday in Grand Rapids, Mich., as follows: "From 800 to 900 spectators lined the course over which the machines flew to witness the sport and it is said that money changed hands freely on the result of the contest. Both drivers rode runabouts, and Thomas was defeated in two straight heats by a large margin by the Cadillac driver."

At a meeting of the Toledo Automobile Club, of Toledo, O., held last Saturday, the trustees voted a sum of \$125 to be used in preparing road maps for the use of members of the club. These maps will show the principal roads leading from Toledo to towns within a radius of 30 miles. A committee was also appointed which will make a trip to South Bend, Ind., and prepare a road map for the benefit of members of automobile clubs in neighboring localities who wish to join the automobile caravan going to St. Louis, Mo. Twenty-five new members were admitted to the club since its previous meeting.

The South Shore Auto Club was recently formed at a gathering of about twenty-five motorists at the Wampatuck Club, near Boston. Mass. Dr. S. H. Spaulding was elected president; E. Leroy Lane, vice-president; Philip F. Hall, secretary and treasurer; F. P. Spear, M. S. Brigham and E. H. Kane, members of the executive committee. An illustrated lecture on the automobile is being arranged for the second week in May, and will be given at the Wampatuck Club house.

Space to the amount of 37,136 square feet has been allotted to manufacturers for the next Crystal palace automobile show. Applications for a further 21,156 square feet are in the hands of the secretary. It is claimed by some English papers that the 1905 show will eclipse the Paris salon both in space and number of exhibitors.

The Motor Cycle Club of Buffalo, N. Y., held its first run last Sunday, the route being to Tonawanda, and return by way of Williams-ville. Forty members started on the excursion but only thirteen completed the run.

Automobile services have been started between Paris, Versailles, Fontainebleau and Chantilly. Three Panhard cars are used in the service.

Announcement of the awards in the Automobile Club of America motor wagon list is expected on Saturday.

The Chicago Automobile Trade Association was incorporated last week.

# AMERICAN MOTOR LEAGUE

## OFFICERS:

ISAAC B. POTTER, President,  
Potter Building, New York.  
CHARLES E. DURYEA, First Vice-Pres.,  
Reading, Pa.  
W. GRANT MURRAY, Second Vice-Pres.,  
Adrian, Mich.  
S. W. MERRIFIELD, Third Vice-Pres.,  
154 Nassau St., New York.  
FREDERICK B. HILL, Treasurer,  
32 Binsford St., Boston.

National Headquarters:  
132 Nassau Street, New York



## CHAIRMEN OF NATIONAL COMMITTEES:

LEGISLATION—  
George H. Bidwell, New York, N. Y.  
ROAD IMPROVEMENT—  
H. E. Olds, Lansing, Mich.  
LOCAL ORGANIZATION—  
Charles F. Foster, Denver, Colo.  
TOURING—  
W. H. Baker, Buffalo, N. Y.  
TECHNICS—  
Charles E. Duryea, Reading, Pa.  
MEMBERSHIP—  
Frank A. Egan, New York, N. Y.  
SIGN BOARDS—  
John B. Price, Hazleton, Pa.  
RACING—  
A. G. Bartschler, New York, N. Y.  
PRES.—  
Joseph Estoclet, Philadelphia, Pa.  
HOTELS—  
Francis N. Bain, Newburg, N. Y.

## OFFICIAL BULLETIN

### PROGRESS OF THE VOTE

Last week nearly 700 postal card ballots were received at headquarters on the subject of uniting the A. M. L. and the A. A. A. into one organization. Only two negative votes have thus far been received and nearly every voter adds a few lines of enthusiastic approval. Here are a few of the expressions sent by voting members:

"By all means. It is the thing to do, and after the merger is completed all must pull together in the same direction."—C. E. BOWN, Youngstown, O.

"I am sure it will be a benefit to both league and association."—GEORGE H. MAYER, Covington, Ind.

"This should make a much stronger body and I sincerely hope the merger will be effected."—EDGEMOND H. TIMANUS, Baltimore, Md.

"Unity gives strength. I think the action will be beneficial."—DR. F. J. DUDLEY, Cerro Gordo, Ill.

"A good thing. Push it along."—H. W. BRACKEN, Hopedale, Mass.

"I am in favor of any measure that will further the interests and convenience of automobile owners and users and protect them from unjust legislation."—DR. C. R. REIN, Van Wert, O.

"I think it is a wise plan and hope you will be successful."—JOHN T. WATERS, Massillon, O.

"Success to the A. M. A."—CHARLES F. POTTER, Denver, Col.

"There should be some central organization to do all this work."—FRANK H. DANIELS, New York.

"Good idea."—DR. LOREN H. STAPLES, Buffalo, N. Y.

"The proposed merger cannot but strengthen both organizations. I am heartily in favor."—C. J. LANGDON, Huntington, Pa.

"It should receive the hearty support of all the members."—CHARLES RUMELT, Lowell, Mass.

"The automobile industry at present needs power. In union there is strength."—HENRY A. BAKER, West Roxbury, Mass.

"I am in favor of hearty co-operation for the general good of automobilism."—DR. ALFRED C. SMITH, Brownsville, Pa.

"May the affairs of the new A. M. A. be conducted in the same liberal spirit as is now the case in the A. M. L."—CARL F. JOHNSON, Milwaukee, Wis.

"Think the merger will be a good thing for us all."—O. C. WICKERHAM, Sinking Spring, O.

"I believe the union of the two organizations will strengthen the good work."—ETHEL WHITEHEAD, New Paris, Ind.

The brief paragraphs quoted constitute only a small portion of the many expressions of approval sent with the mail vote and it may be safely said that the proposition to merge the two organizations into one will be almost unanimously approved.

### WORK OF NEW ORGANIZATION

The American Motor Association will be a popular organization and its aim will be to bring as many popular benefits to its members as possible. Naturally these benefits will increase with the increase of numbers. It is not likely that the annual dues will be increased and a joint committee of the two organizations is now at work preparing a constitution and by-laws for the American Motor Association. To so arrange this document that it will provide for retaining the best features of both organizations without conflicting with the interests of either is no small task, and it is hoped that all members will be patient and forbearing during the formative period of the A. M. A. and be ready to take up the work of enlarging its roll as soon as the new membership blanks are sent out.

### ROUTES WANTED

Chief among the benefits and objects of the new organization will be the supplying of road information, and to do this a great deal of help will be needed from automobilists who travel our roads during the coming summer. The information sent in will be carefully compiled, and as fast as principal routes of a given state are fully described a road book of that state will be prepared and issued. Many routes are wanted and to get the work

fairly under way there will be suggested from week to week a number of routes, which should be accurately described and sent to headquarters by members who have the information at hand. Routes wanted include the following:

OHIO ROUTES—1—From Cleveland to Akron, Massillon, Canton, New Philadelphia, Coshocton, Zanesville, Marietta.

2—Toledo to Fostoria, Marion, Delaware, Columbus, Chillicothe, Portsmouth.

3—Toledo to Bowling Green, Findlay, Kenton, Bellefontaine, Springfield, Dayton, Hamilton, Cincinnati.

4—Youngstown to Cleveland, Sandusky, Fremont, Toledo.

5—Youngstown, Alliance, Canton, Massillon, Wooster, Mansfield, Marion, Kenton, Lima, Van Wert to Ft. Wayne, Ind.

Route slips of the American Motor Association will be sent out in large quantities as soon as the merger is completed—about May—and every loyal member will have a chance to contribute something toward the work of making up these road books.

### FULL VOTE WANTED

A large number of votes are still to be cast on the subject of uniting the A. M. L. and A. A. A. Every member should cast his vote. It is not a subject that calls for indifference or even suggests it. The officers of the A. M. L. will meet the officers of the A. A. A. about May 1 and the spirit of that meeting should be enlivened by a large and encouraging vote from the members of both organizations. Let every member who has not voted send his postal card to headquarters at once.

### CONSULS

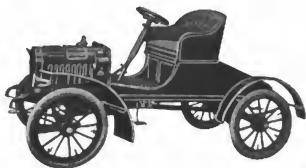
The terms of merger between the two national bodies require that local organizations shall be retained and consuls will doubtless be appointed and continue in office under the new association and will have duties similar to those prescribed by the A. M. L. The satisfying thought of having one united body in which all automobilists are or ought to be interested will inspire consuls to work vigorously and to achieve success. A great many letters at headquarters are waiting to be answered and delay has been made necessary by the reason of the great uncertainty of conditions attending the joining of the national bodies. Those letters will now be taken up and answered, and the work of the association will be put in motion and prosecuted as vigorously as possible.





# THE CAMERON CAR

## \$650



The Fastest and Most  
Satisfactory Run-  
about on the  
Market. ♢ ♢

We use Brains and  
Good Material.

With Detachable Tonneau,

## \$750



TREAD.—46-inch or Standard. Wheel base, 76-inch.  
GUARANTEE.—We guarantee the Cameron car absolutely for one year.

AGENTS WANTED IN UNOCCUPIED TERRITORY.

UNITED MOTOR CORPORATION, Pawtucket, R. I.



The Speci-  
fications Show  
Its Unusual Value

ENGINE.—Single vertical cyl-  
inder, developing 6 to 9 horse pow-  
er, cooled by 10-inch fan. Bearings,

phosphor bronze. Splash lubrication.

CARBURETER.—Float Feed. Air and  
Gasoline controlled by one lever.

IGNITION.—Jump spark from non-vibrator  
coil.

TRANSMISSION.—Sliding gear; two speeds.  
Gearing cut and hardened machinery steel. Enclosed  
in dust proof case and packed in solid oil.

DRIVE.—Shaft, through universal joint to bevel gear.  
Gears and shaft enclosed in dust proof case and packed in solid  
oil. Roller bearing rear axle.

BRAKES.—Very powerful double acting, internal expanding,  
adjustable to wear.

BODY.—Air seasoned lumber. Oak sills and whitewood panels.

FINISH.—Any color, with upholstering (leather) to match (tufted or plain)

SPRINGS.—Oil tempered, semi-elliptic front, full elliptic rear.

WHEELS.—Artillery, of second growth hickory.

TIRES.—Clincher.

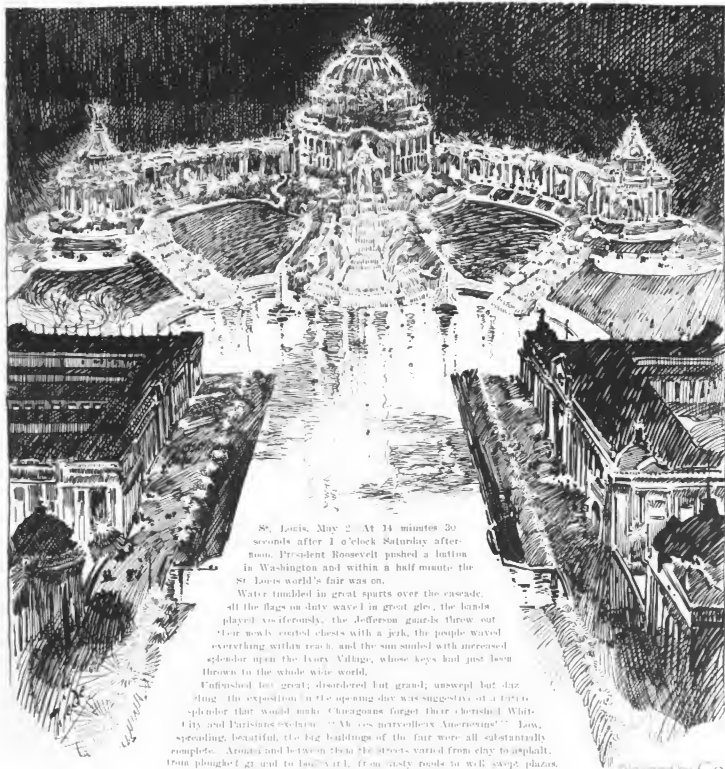
# MOTOR AGE

VOL. V. No. 18

MAY 5, 1904

\$2.00 Per Year

## OPENING OF THE WORLD'S FAIR



St. Louis, May 2. At 14 minutes 30 seconds after 1 o'clock Saturday afternoon, President Roosevelt pushed a button in Washington and within a half minute the St. Louis world's fair was on.

Water tumbled in great spurts over the cascade, all the flags on duty waved in great glee, the bands played vigorously, the Jefferson guards threw out their newly coated clubs with a jerk, the people waved everything within reach, and the sun smiled with increased splendor upon the Ivory Village, whose keys had just been thrown to the whole wide world.

Unfinished but great; disordered but grand; unswept but dazzling the exposition in the opening day was suggestive of a Parisian splendor that would make Chicagoans forget their cherished White City and Parisians exclaim: "Ah les merveilleux Américains!" Low, spreading, beautiful, the big buildings of the fair were all substantially complete. Around and between them the streets varied from clay to asphalt, from ploughed ground to lawns and, from dusty roads to well swept plazas.



THE TRANSPORTATION BUILDING IN WHICH ARE THE AUTOMOBILE EXHIBITS

The interior of the buildings presented a contrast of things done and undone in the bringing together of the world's products. No place was finished; but out of the great confusion of the day before had come a wonderful hiatus in the midst of preparation—a pause while St. Louis shook hands with the nations of men and bade them welcome. There was no disappointment in the incompleteness of the exposition. The finishing touches were not needed to show its extent and its equality with the other great universal expositions. At a glance it proclaimed itself a real world's fair and no first-class imitation.

Standing right by the main-entrance-to-be, almost the first of the series of principal buildings and all but one the largest of the exposition, the white-walled moss-green-roofed transportation building gave a fair idea of the stature of the fair and of the lesson it teaches of the progress in the arts and industries since the Columbian exposition at Chicago. Here was spread the promise of a collective display of the world's means of travel from the first to the latest, by land, water and air.

Here was the promise of an exhibition of motor cars greater than that of any other single medium of travel and one of the most extensive, most attractive and most progressive displays in the whole grounds. The huggies and the wagons and the boats and the trains had all been at the White City. One automobile had been there as a curiosity. Bicycles had been there by the scores and hundreds. Here almost 80,000 square feet are devoted to automobiles. The bicycle is here too in small but respectable array, but equal to it in importance as a collective display is the motor bicycle, proud in the honor of being younger brother to the new king of all the things that go.

No change in the affairs and ways of men could be more noticeable than that marked by this exhibit of means of transportation when it is compared by that which was behind the great gold doorway at Chicago. Even the two exhibitors of bicycles have those with motors above the pedals. Even the exhibitors of boats have those which were the outgrowth of the automobile industry. Even the exhibitors of carriages and wagons have automobiles within the same spaces. Even the exhibitors of harness and saddlery have appointments

for automobiles. Even the exhibitors of carriage and bicycle lamps and tires make up the greater parts of their exhibits with goods for automobilists. Even the exhibit of railway trains is encroached by the automobile railway inspection car.

In size greater than that of any other display of one class of goods; in character more brilliant and attractive than anything else in the building; in the method of its display more striking and gorgeous than the carriage, the train, the best display—if not the equal or superior in arrangement and embellishment of all the several exhibits at the fair—the automobile section when completed will dominate the transportation building just as now in its partially installed condition it dominates the other unfinished exhibits.

When President Roosevelt pressed the button that turned on the power and thrilled the great exposition with life, he not only inaugurated the latest and possibly the best of such expositions, but he announced to the world that the time for emancipation had come. Perhaps he did not realize it. His message of greeting to President Francis of the exposition and the latter's reply said not a word of it. But the supremacy of the automobiles in the transportation building represented at the moment of the opening, as it will during the

continuance of the fair, the only one thing within the whole grounds indicative of an actual and complete revolution of industrial and commercial customs.

The agricultural building presented the gradual development of an industry as old as the hunger of man. The horticultural building presented the ability of man to improve upon the bounties of God. Machinery hall presented the steady advance of an industry whose marvels are the accrued interest of centuries. The manufactures, varied industries and liberal arts buildings presented only the natural growth of the common phases of society and industry. The government building tells only the story of our international importance. The mines and metallurgy building presented the raw materials which mother nature had laid in store for man before he came to conquer the earth. The fine arts building presented the attempts of men of today to equal the achievements of men who were sculpturing and painting works of art while the real man of America was painting his face and scalping the works of God. The electricity building was but the expression of the new wonders of an industry that asserted itself a decade ago. The state buildings were simply the memorials of the political, agricultural, social and industrial hardships and triumphs of the commonwealths which make up U. S. A., Limited. The foreign buildings were but similar tributes to the new and old nations of men. The pike was but a graphical presentation of the extraordinary, the grotesque, the hilarious and the playfulness of nature and human nature.

The transportation building is the only one of all the divisions of the exposition which presents a decisive innovation in the character of the things which it holds. Perhaps only of the whole fair does the wireless telegraph station equal it in the graphic suggestion of a sweeping effect upon the world's work. It is the world's work that the fair depicts. It is in those two phases alone that a marvellous shifting of methods since the Chicago exposition is broadly noticeable.

When Theodore Roosevelt telegraphed David H. Francis congratulations on the memorable occasion of the opening he extended greeting to the chief of an enterprise that outclasses all the world's fairs of the last 20 years in the existence in it of one particular charac-



PRESIDENT FRANCIS MAKES THE OPENING ADDRESS

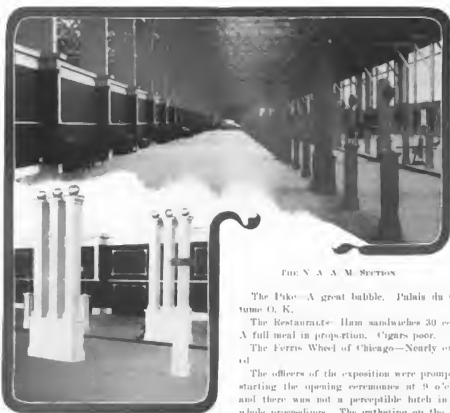
teristic showing a universal change in the ways of man—the revolution of his transportation.

The opening day was bright, fair and warm—a wonderful exception in the usual routine of spring sloppiness in St. Louis. The great disorder of the day before had been changed to order as much as possible. A hurried house cleaning of all the buildings rendered them clean and pleasant, if not complete in the matter of installed exhibits. The unfinished streets were cleared as much as possible of debris and the appliances of pavers and landscape gardeners. All work was stopped. St. Louis as a city locked the doors of its business and sent its citizens out to the fair to formally inaugurate the exposition they had watched grow stick by stick. According to local estimates over 200,000 flocked to the grounds to make the opening a memorable gala day.

There was not a great attendance from out of town. Officials, exhibitors, representatives from foreign countries and concessionaires were there, and also a fair number of people from closely surrounding country. The regular fair visitors had not arrived, the people recognizing the fact that the exposition not being complete it was not the time to spend much money in going far to see it. The crowd was of St. Louis, jubilant in the inauguration of the exposition so long hoped for, and with little desire to spend time inspecting exhibits, even had all the displays been in readiness. The occasion was a celebration pure and simple. Good nature abounded.

A hurried survey of the fair showed the buildings which were thrown open to the public to be in the following stages of completeness:

**Transportation Building**—All of the locomotive and railway and about half the carriage exhibits in place. Most of the foreign automobile exhibits on hand in crates ready for installation. Some of the boats ready. The American automobile section complete in decoration, etc., and a few of the cars installed.



THE PIKE—A M. SECTION

The Pike—A great bubble, Palais du Costume O. K.

The Restaurant—Ham sandwiches 30 cents. A full meal in proportion. Cigars poor.

The Ferris Wheel of Chicago—Nearly overtaken.

The officers of the exposition were prompt in starting the opening ceremonies at 9 o'clock and there was not a perceptible hitch in the whole proceedings. The gathering on the central plaza was a brilliant one and was orderly. The officials were escorted by a parade of some consequence and more dignity, if not as much beauty and oddity as that of the Pikers in the afternoon.

President Francis called the assemblage to order and Reverend F. W. Gunnalus, of Chicago, delivered the invocation. The first speaker was President Francis and he was followed by Director of Exhibits Skiff; Mayor Wells of St. Louis; Thomas H. Carter, of the national commission; Senator Burnham, speaking for the senate; E. H. Harriman, of railway fame; Commissioner General Michael la Grave, speaking for the foreign exhibitors; and Secretary of War Taft, acting as the representative of the president of the United States.

The speeches and ceremonies lasted until 15 minutes after 1 o'clock, when the exposition was formally inaugurated by the pressing of the electric button in Washington by the president, the machinery being set in motion and the water beginning to flow over the cascade—dirty, mud colored water that even the Chicagoans laughed at.

The parade of the people of the Pike was started at 3 o'clock.

The people of the transportation building were no less cheerful over the auspicious opening than the officials who jubilantly conducted

**Electricity Building**—Telegraph plant complete and other exhibits being installed.

**Machinery Hall**—Machinery of the fair in operation. Other displays awaiting completion of floor.

**Varied Industries Building**—Probably half the exhibits on hand for installation, some being in readiness.

**Horticultural Building**—Little in place, but building ready for displays.

**Agricultural Building**—Most of the central portion occupied and a sprinkling of exhibits around the walls.

**Government Building**—Practically in readiness.

**Manufactures Building**—Over a third of the displays ready and much unpacked stuff on hand.

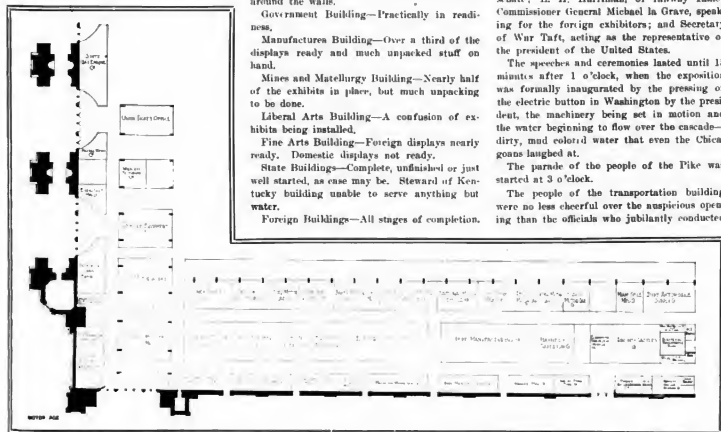
**Mines and Metallurgy Building**—Nearly half of the exhibits in place, but much unpacking to be done.

**Liberal Arts Building**—A confusion of exhibits being installed.

**Fine Arts Building**—Foreign displays nearly ready. Domestic displays not ready.

**State Buildings**—Complete, unfinished or just well started, as case may be. Steward of Kentucky building unable to serve anything but water.

**Foreign Buildings**—All stages of completion.



PLAN OF THE AMERICAN AUTOMOBILE SECTION OF THE TRANSPORTATION BUILDING

the ceremonies on the plaza, and of them all no class seemed more satisfied with the auspicious opening than did that composed of the small band of automobile folk on hand. To them it was not an improbable hope to see at the next world's fair the transportation building renamed. It was a fact to them that an automobile section was the dominating influence of the building—while even an outsider could not help to note that the National Association of Automobile Manufacturers section was the dominating influence of the automobile department.

The transportation building is a long, low structure, with most of its beauty on the outside. Structural iron work having been prohibited by its cost, the building frame work is of wood and the low spreading roof is one great forest of pine. In the center of the floor space stand the street cars, railway trains and the well known and much cherished B. & O. display of the evolution of the railway locomotive.

Flanking this at one end of the building is the exhibit of the carriage and allied trades. Then comes the exhibits of American automobile manufacturers who are not members of the N. A. A. M., and extending beyond this and around the corner to the center of the opposite end of the building is the collective exhibit of the N. A. A. M. Occupying a corresponding but smaller space on the other side are the transportation displays of European countries. Boats and odd lines complete the show. The bicycle exhibits are in the automobile section, being made by two concerns, one of which makes automobiles and motor bicycles and the other being engaged in the manufacture of motor bicycles.

The railway exhibit was substantially complete Saturday. Its character speaks for itself. There are no decorative features.

The carriage exhibit was partially installed and is a motley collection of all of the types, styles, patterns, etc., of horse drawn rigs and appliances supplementary to them. The embellishments of the exhibits has been individually carried out, resulting in all possible styles of exposition decoration.

The European transportation exhibits are characteristically enough substantially on automobile display, France, Germany and Italy evidently not caring to show anything but their respective automobiles, judging by the character of the goods already in the building. These exhibits are partially installed, but thus far no attempt has been made to decorate the spaces.

The N. A. A. M. corner is the exhibit de luxe of the building, if not of the fair. It is a family affair—an exposition home, built up in white and gold with maroon and green walls. It stands a monster unit in the building the criterion by which the degrees of excellence of setting of the other exhibits may be gauged.

Down the long side space are two aisles which separate the floor into a middle and two wall platforms, while across the end at a right angle to these are two wide long platforms, raised like the others about 6 inches and made of highly polished Georgia pine. At intervals heavy clusters of square fluted col-

umns in white trimmed with gold mark the extent and boundaries of these N. A. A. M. platforms. White pedestals between the columns carry brass signs bearing the association's and the exhibitors' names alternately. The walls are wainscoted with maroon burlap, above which to a white and gold cornice and frieze extends green burlap, both colors being paneled with gold leading. From the cornice to the ceiling of the building green and yellow panels of burlap hide the rather unsightly studding of the side walls of the building. Punctuated across the top white and yellow burlap bolts from sight the ugly rafters and trusses of the roof. This roof burlap was only partially hung Saturday, but was all ready for quick completion.

There are no divisions of the platforms. The exhibits are one. Over the polished floor are strewn Turkish rugs, while each exhibitor is furnished with a green couch, an oak desk

transportation department would contain an extensive display of automobiles. American makers were not disposed individually to spend the large sum of money which would have been necessary to make an equally comprehensive display, nor were they willing, on the other hand, to allow foreign exhibitors to take undisputed possession of the exposition field.

Experience at earlier expositions had shown that the arrangement, equipment and maintenance of space is, as a rule a costly matter. The expense, at the Pan American, for example, having been from \$3 to \$4 per square foot for equipment and space rental alone.

While uncertainty still existed the N. A. A. M. took the matter in hand, ascertained who desired to exhibit and then approached the exposition authorities with a proposal to make a great, collective exhibit of the products of those members of the association who cared to take part. The exposition people finally agreed to permit the association to make the shipment of four-fifths of the entire automobile exhibit.

Contracts were then entered into with the exhibitors, each agreeing to pay his share of the expense of equipment and administration. Then the real work commenced. Contracts were made for pillars, partitions, wall coverings, overhead decoration, signs, desks, chairs, rugs, lounges and every other essential feature, so that all the exhibitor would have to do would be to supply the cars or other goods. The actual work commenced a month ago. It is now complete, exactly as planned. Commander Baker, assistant chief of the department, while in New York recently declared it the most attractive exhibit in the transportation building. And yet all this has been accomplished at a cost to the exhibitors of 50 cents a square foot. The arrangement has proved the most economical stroke of business in the history of expositions.

The tale of the opening of the fair would not be complete without mention of the fact that the previously made rule to bar automobiles as well as carriages from the grounds has been rescinded. They will be allowed within the fair while the gates are open to visitors, but must stick to a prescribed route, which circles the exposition. In accordance with this

new ruling motor passenger buses which hauled people to the ground Saturday took their loads inside and made the circuit of the exhibition.

From dawn until dark, when the myriad incandescent spotted the deep jet above the ivory palaces, there was not a notable disappointment in the opening day of the Louisiana Purchase exposition. It was a great day for all concerned and none was more generous in complimenting St. Louis upon her achievement than those of other cities who had earlier in the game refused to believe the suggested extent and scope of the exposition. It is greater than it seems on account of the close piling of the buildings, which cuts off the general view from most every point, and it is a fortunate thing that at this exposition the automobile industry of all the industries, should be represented so conspicuously. Equally fortunate is it that the American end of the new field is boldly and aggressively compared with the older European end.



WATCHING THE PARADE OF THE 'PIED PINK'

and chairs to match, making a rich simplicity.

All this is uniform and it is all ready. It awaits but the automobiles to become the star feature of the building.

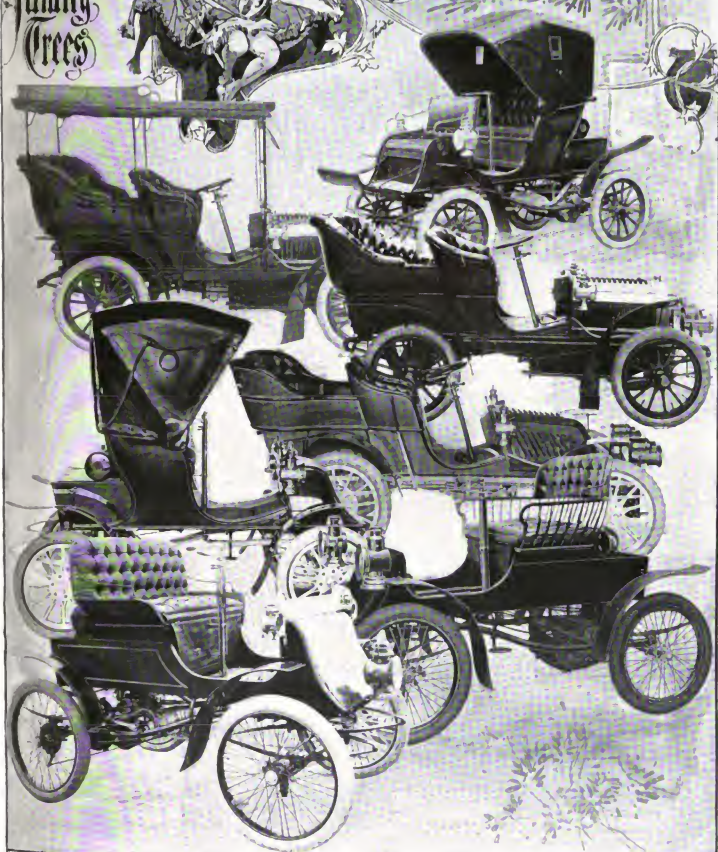
A few cars were in place Saturday. Many are in freight cars in the St. Louis railway yards and more are on the way. The exhibit will be practically complete by the first of June. To Grout Bros. of Orange, Mass., belongs the honor of being the first exhibitor on the spot with the goods. Others who had exhibits in their respective spaces Saturday were the White Sewing Machine Co., the Pan-American Polish Co., the Shelby Steel Tube Co., the Hendee Mfg. Co., the St. Louis Motor Carriage Co. and the Timken Roller Bearing Co.

In its work in connection with the automobile department of the St. Louis exposition the National Association of Automobile Manufacturers has rendered a great service to the trade. When the exposition was announced it was made known that the French section of the



# Motor Car Family Trees

No 7  
THE PIERCE



The Great Arrow—1904  
Pierce Stanhope—1904  
Pierce Motorette—1901

The 1903 Arrow

Pierce Stanhope—1904  
Two-Cylinder Arrow—1904  
Pierce Motorette—1901



# MOTOR AGE

Published Every Thursday by  
THE TRADE PRESS CO.  
1303 MICHIGAN AVENUE CHICAGO  
Telephone Calumet 7011

New York Office, 114 West 14th Street.  
London Office, American Publications  
Bureau, 15 Manor Place E.C.4, Harlesden, N.W.

Entered at the Chicago Post Office as Second  
Class Mail Matter

Subscription, Two Dollars per Year  
Foreign Subscription, Four Dollars

Any Newsdealer may obtain Motor Age through  
the Western News Co., Chicago, or any  
of its branches, on a returnable basis

## HOW FAST TIMES ARE MADE

**A** FRENCH marine journal, commenting on the recent motor boat race meeting at Monaco, states that while the splendid speed performances of some of the boats will be talked about for many days, it has found out that some of the reported times are quite subject to doubt owing to the fact that several times during the meeting some of the buoys drifted and that it was consequently impossible to take a correct time for a distance about which one had no definite measurement. In one particular case a small boat with a comparatively low-powered motor is credited with having covered a certain race in a time which figures out an average of 30 miles per hour. The maker of the boat laughed when he was informed of the time credited to his craft and said that it was not possible that it could develop even 20 miles per hour.

Of the fact that the few foreign motor boats which competed did not show superiority of speed, the journal says: "Let us not be too enthusiastic over our successes and too overconfident in the future. The fact that our neighbors do not make so many boats does not mean that theirs are not as good, even though they do not develop the speed of our Trefle-a-Quatre. The German and the English are making splendid craft, and the former especially must be reckoned with. Everybody seemed to have noticed the splendid running qualities of the foreign-made boats, which showed more steadiness than ours. This meeting has given our manufacturers an opportunity to discover many weak points in construction and will no doubt enable them to come back to Monaco next year with greatly improved racing boats."

## THE CUP RACE TEAM

**E**NTRIES for positions on the American team for the James Gordon Bennett international cup race have closed. There are three entrants. But one of these, the Peerless, is an original entrant.

The other two are later entries made after the announcement that the entry time would be extended a month. They are welcome entrants to replace the two original entrants who withdrew, Peter Cooper Hewitt and Alden Sampson II. One of these late entrants is the Winton

Motor Carriage Co.'s Bullet 11. The other is Walter Christie's front wheel drive racer.

The story of the work of the Automobile Club of America in finally passing upon the eligibility of these candidates is on another page of this paper. There is little opportunity for comment upon the situation.

The outcome can only be guessed. It is a fairly safe guess, however, that the club's committee will accept all three of the candidates.

The Peerless 1904 cup racer is said to be fast enough to win the race. The Bullet is known to be fast enough. The Christie car is not as fast a machine as many others, but it is as fast as need be for driving a race over such a course as the Homburg road in Germany.

It appears that in each case the main test will be that of reliability and steadiness of running. It is to be hoped that all of the cars will show up well in this particular. The personal equation—the skill of the drivers—must of necessity take care of itself.

There is some little satisfaction in the entry of both the Peerless and Winton cars. These were the ones that represented us last year. It is truly good sportsmanship to go back into the big race with the same makes and, in the instance of the Bullet, with the very same machine.

We are not favorites to win. Our chance is a long one. But it is to at least be taken for granted that we will stick through the race and finish with the fast brigade.

Here's hoping that Winton-Peerless-Christie will be our representative in the international race and put up a game, hard fight.

## THE OTHER WAY ABOUT

**O**NCE in a while an automobilist becomes a party to an accident and finds before his identity becomes known. He is the man who has brought public censure upon automobilists as a class.

As a class automobilists claim to be gentlemen, and deny that the cowardice of an occasional person characterizes the whole class.

The public, the press and the authorities are often misled into this wrong judgment of all automobilists by the pattern of a few.

The best proof that could be offered of the fact that individuals and not classes of individuals must only be held responsible for cowardly acts, is found in the accident last Sunday which resulted in the death of an automobile dealer of Highland Park, Ill., for in this accident the usual conditions were just reversed.

It. S. Ringi, the victim, while driving on a country road, encountered a horse and wagon and was forced off the road into a ditch. Both he and the women who were with him were hurled out of the car and Mr. Ringi was caught under the car in the water of the ditch. He was killed.

Meanwhile the farmer had taken his way down the road, leaving one injured and one unconscious woman and a dying man behind.

Had the case been reversed the whole community would have been up in arms against automobilists.

Here was a coward, but being a farmer instead of an automobilist, the community accepted his cowardice as but the personal behavior of one man.

All farmers were not judged cowards by his act.

Is the community wise enough to see in this case the lesson that all classes of men are made

up of both gentlemen and cowards—and that the gentlemen predominate?

Is the community ready to adopt the policy of holding the man alone guilty—or will it persist in the condemnation of a class for the acts of a few undesirable members of it?

Automobilists of a rational mind ask no privilege that is not accorded all others. They ask no leniency from their just deserts. They ask simply to be judged by their individual acts and not by the acts of a few others of the same class.

W. W.

The daily papers have decided that ordinarily a woman cannot concentrate her mind; that the weakness that makes her ask questions would develop in handling an automobile and make her a dangerous driver; that the woman who has learned to do one thing well would prove the exception. Most women have learned to talk.

W. W.

No wonder the Britishers do not think much of our records and record-breakers. Their knowledge of our cars is no complete that their lending automobile journal pictures the 1903 Peerless racer as a Haynes Apperson cup candidate.

W. W.

Buffalo's fire commissioner favors horse flesh power to motor power for moving fire apparatus, but then he probably had not heard of the New Jersey case where the fire horses were "all in" and an automobile took their places.

W. W.

A Philadelphia girl in a yellow automobile "reined up to the sidewalk" recently to rain blows on a yellow dog engaged in eating a man's tomatoes. Nice combination, all this—and in Philadelphia, too.

W. W.

Cleveland is to have an automobile quadrille for the benefit of a kindergarten. It will then be up to the Chicago Automobile Club to hold a motor car cake walk for the benefit of es-jointed city officials.

W. W.

Like every local council every country newspaper now has its little automobile joke. One is for the benefit of motorists and the other for the rural reader, however.

W. W.

If St. Louis does not mend her streets a little that big world's fair automobile tour will develop into another endurance run after it crosses Eads bridge.

W. W.

A Detroit paper advises policemen to use bricks in stopping too speedy automobiles; in New York it is a felony to throw missiles at an automobile.

W. W.

With how many different makes of tires did the winner of the James Gordon Bennett international cup race be fitted this year?

W. W.

An 8-mile speed law is a hardship on a few motorists, but think of the pleasure it gives thousands of farmers.



# METROPOLITAN GARAGE GOSSIP



The Auto Import Co. is beginning to receive shipments of *Rochet-Schneiders*.

The first of the Olds tonneau touring cars has been received by the Oldsmobile Co.

A car a day was the record of Haynes-Apperson sales by the Brooklyn Automobile Co. last week.

The American de Dietrich Motor Car Co. reports sales of many de Dietrich cars during the past few weeks.

The Pioneer Automobile Co., agent for Yales and Couriers, expects shortly to begin the importation of a Belgian car.

The new 1904 Olds touring car reached the Oldsmobile Co.'s garage on Saturday and was driven by Assistant Manager Howell in the parade.

Norris Mason, of the Michelin Tire Co., sailed last Monday on a 3 weeks' business trip to Paris. The company is receiving weekly large shipments of tires.

Eight Flats—six finished cars and two chassis—are en route to fill end of April orders taken by Hollander & Tangeman, who sold twelve cars the past fortnight.

The Richmond Automobile Co., agent for the Elmore, has moved its repair shop to the second floor and put in an elevator. Some of the light tonneaus have been received.

On the strength of the demand arising from the victory of the Orient in the Boston hill-climb, E. J. Willis ordered a carload of the hubboards in addition to the regular usual shipment.

Homan & Schultz have received the first of the National gasoline touring cars, which are of 20 horsepower and sell at \$2,000. It has made considerable of a sensation and is showing up well in demonstration.

F. E. Moscovics started on Monday in a Clement-Bayard fitted with continental tires on a business tour to St. Louis by way of Buffalo and Chicago in the interests of Sidney B. Bowman and Emil Grossman, the importers of the car and tires.

Joseph Corvan has added a third Knox single cylinder tonneau to his Clason Point automobile line. Some interesting statistics of the performances of the Knox cars on this line appeared in *MOTOR AGE* in a story of Clason Point as a resort for automobilists.

C. H. Tangeman has just returned from a flying trip to the St. Louis exposition. The demand for the Fiat, which the firm of Hollander and Tangeman represent in this country, has made it necessary for them to withdraw all the cars which they intended exhibiting.

Regular shipments of Northerns, making prompt delivery possible, are giving Peter Fogarty, their new agent, considerable trade. Mr. Fogarty points to the significant fact that though 120 Northerns were sold in Newport last year, none of them appear advertised in the second-hand sales columns.

Alexander Fischer has received the two 24-horsepower engines, which are to be coupled and fitted to Frank Croker's 43-foot launch, whose hull was in view at the Herald Square motor boat exhibition. Mr. Croker's flyer will be in the water within 30 days. Mr. Fischer received seven Martini cars this week.



H. W. Alden, of the Electric Vehicle Co., made the run from Philadelphia to New York last week in one of the new Columbia two-cylinder light tonneaus. He covered the distance in a little over 6 hours, which was just under the legal speed limit. But one stop was made—a halt of 40 minutes at Trenton for luncheon.

The Willis Automobile Exchange has been established at 220 West Thirty-sixth street by E. J. Willis, who sells sundries and is the agent of the Orient on Park place. His idea is to handle all makes of cars that may be placed with him on consignment. He believes that such an exchange will meet the approval of makers as well as the buying public.

A model of the Quinby aluminum body to be fitted to the Simplex cars is on view at Smith & Mabley's garage. It has individual seats in front and a surrey tonneau with side entrances. The rear seat holds three. There are also two folding seats in front of the rear seat, which are removable and fold automatically with the opening and closing of the side doors.

The Eisenhuth Horseless Vehicle Co., of this city, whose factory is the big Keating bicycle plant at Middletown, Conn., will have ready within 10 days a 60-horsepower car for the St. Louis exposition. By the middle of June thirty 18-20-horsepower touring cars, selling for \$2,000, or \$2,500 with top and full equipment, will be completed, and 30 days later popular priced runabouts will be ready, says E. L. Ferguson.

The Americus de Dietrich Motor Car Co.'s garage is now complete. It is kept open until midnight and presents a brilliant spectacle from the street with its electric lights and handsome interior fittings. The "clou" of the de Dietrich exhibit at St. Louis has been shipped. It is a voiture saloon with a most elaborate limousine tonneau, having in its equipment eight electric lights, four revolving easy chairs, a cigar cabinet, a buffet de sport containing implements for several games, and other novelties. The car is of 30 horsepower, and has a wheel base of 12 feet. Its price is \$20,000.

One of the moving pictures at Keith's last week portrayed the famous climb of the Martini car up the Roche de Naye mountain in Switzerland, over an average grade of 23 per cent for a mile and a quarter. The biograph apparatus was placed on a train ascending the switch-back road and photographed the car at times following and at times climbing ahead of the train. The picture is startlingly vivid. One sees the car start from the plaza in front of a hotel, and all through its long climb ending at the snow covered summit. All

the motions of the operator are visible, including the changing of the speeds and the feeling of the radiator on the lookout for overheating.

## RECENT INCORPORATIONS

New York—Willis Automobile Exchange, capital \$25,000. Directors, E. J. Willis, A. W. Myers and M. C. Hard.

Brooklyn, N. Y.—Outing Automobile Co., capital \$30,000. Directors, F. L. Smith, Albert Butte and A. L. Broughman.

Newark, N. J.—Breego Motor Mfg. Co., capital \$10,000. Incorporators, George A. Breego, Hugo Stummel and Joseph W. Weber.

Buffalo, N. Y.—Buyers and Manufacturers' Automobile Co., capital \$300,000. Directors, Carl Thorden, W. H. Van Dusen and C. V. Roly.

Boston—The Angier Co., capital \$10,000. To sell automobiles. Incorporators, William M. Barber, Oscar M. Angier and Eugene E. Kinsey.

Ogden, Utah—Intermountain Automobile Co., capital stock \$15,000. Dealers in automobiles, bicycles and machinery. Emory A. Smith, president; Levi H. Murdock, secretary, treasurer and general manager; Ralph M. Grange, vice-president and assistant manager; the board of directors is formed by the officers, J. Murdock and E. Smith.

Davenport, Ia.—Black Hawk Electric Co., capital stock \$10,000. To repair automobiles and deal in electrical goods. Officers: President, W. A. Fuller; vice-president, James E. Bayless; secretary and treasurer, John H. Eagal.

Portland, Me.—Church Balanced Impact Steam Turbine Co., capital \$750,000. To build and sell automobiles, engines and boats. President and treasurer, George F. Gould; directors, G. F. Gould, J. T. Fagan, B. M. Welch, B. S. Church, Plainfield, N. J.; T. C. Hillhouse, Yonkers, N. Y.; S. M. Hitchcock, New York city.

Providence, R. I.—Suddard Motorcycle Co., capital \$50,000. To manufacture motor bicycles, motors for automobiles and yachts. Incorporators: John E. Thompson, of Central Falls; W. A. Suddard, Dexter; B. Pottor and William W. Nichols, of Providence.

Holyoke, Mass.—Holyoke Auto Storage and Repair Co., capital \$25,000. President, Joseph H. Lamay; treasurer, Frederick M. Holmes.

Ridgfield, N. J.—Motor Tally-Ho Co., capital stock \$30,000. To rent and repair automobiles. Incorporators: Nelson M. Ayers, Ridgfield, N. J.; Geo. H. Wright and H. S. Fairchild.

## BOSTON RACE MEET PLANS

Boston, May 2.—It has been definitely decided to give one special event, in addition of course to the regular list, at the forthcoming meet of the Massachusetts Automobile Club at Readville on Memorial day. This is to be a 10-mile race open to all weights and powers. There are two prizes offered in either cash or plate, the first being \$250 and the second \$150. The idea of making the race open to all motive powers is to give the steam men an opportunity to prove the truth of their claim that steam is faster than gasoline, something they have been contending for over a year. The regular list of events has not yet been decided upon, but will consist of seven regular events, and one or two special races.

## PARADE IN THE

**N**EW YORK, May 1—Starting in a drenching rain, which began a half hour before the hour set for the formation of the line, and continuing over slimy park roads and boulevards and slippery asphalt pavements, the Automobile Club of America pluckily put through its scheduled parade this afternoon. Though announced as the "first annual" parade of the club the memory of the followers of the game goes back to a parade of the club some four or five years ago, when twenty-seven or perhaps it was thirty-four cars turned out and won for the club considerable patting on the back for its brave showing.

Despite the almost prohibitory weather conditions of the formation hour, which continued for a half hour from the start and so far as the going went lasted the whole afternoon, over 200 automobiles turned out. The Motor AGE man counted on the Riverside drive 226, Jervis, of the Sun, added some stragglers and put it at 250. Gerrie, of the Herald, who was stationed in the club windows, made it 215 entering the park and 178 surviving as the parade passed the club on its return.

It is a conservative guess to say that the number of paraders probably represented at the least but one-third of the cars which would have participated had the weather conditions been favorable. Word came to the unfettered mud larks, who waited bravely in their appointed stations, that the garages were filled with owners who had intended to parade, but refused to take a drenching themselves, or submit their vehicles to a mud bath to make a Manhattan holiday.

"This rain is nothing," quoth A. L. Riker from beneath his dripping cap visor. "It is a cinch beside the Pittsburgh rain."

Nor did the storm seem to bother Augustus Post, king of the mud larks, another Pittsburgh run veteran, a little bit, nor the brave array of White drivers that accompanied him.

It was indeed a shame, that rain; for despite the brief time allowed for preparation the committee and the tradesmen had worked with a will with every prospect of a turnout of cars to the number of at least 600 that would have stretched from the club at the Fifth avenue park plaza to Grant's tomb at the north end of the Riverside drive. The garage keepers had personally and by letter urged all their customers to participate. Some had appointed rendezvous at their garages that the "masses" might proceed to the starting point and take their places in line in bodies. Percy Owen expected a Winston squadron of forty and there was not a little fellow that



COMMERCIAL VEHICLE SECTION

had failed to recruit at least a dozen owners.

At 1:30 o'clock, the hour set for the assembling of the paraders, the Motor AGE man counted fewer than twenty cars in all at their stations, outside of a dozen assembled at the club to carry the officials and guests. At 2 o'clock, the hour set for the start, the American touring and runabout and the foreign car divisions had about fifteen each in line. Bravely and patiently their occupants waited, the victorias, limousines and canopy top pers giving their open air unfortunates the hugh. For half an hour stragglers came slowly in and took their places in line. At half past 2 o'clock a courier came down the line and settled the mooted question of abandonment or postponement by saying the start would soon be made. Fifteen minutes later the leaders swung into the avenue from Fiftyfifth street and the parade was on.

The arrangements on the formation of the parade were excellent. The various divisions formed in the side streets off Fifth avenue, facing east. The guests' division met on Fifty-eighth street and headed by Winthrop E. Scarritt, president of the club, and Emerson Brooks, chairman of the committee, proceeded down Madison avenue to Fiftyfifth street and across to and up Fifth avenue, the various divisions falling in in order from First street to Fifty-sixth street. The commercial vehicles, with J. D. Rainer as marshal, formed

## MUD AND RAIN

in Fifty-seventh street, and after the pleasure vehicles had passed, proceeded west across Fifty-ninth street up Eighth avenue and fell in behind the pleasure vehicles as they emerged from the Seventy-second street gate of Central park, through which business wagons are not allowed to go, though special permission was granted for them to parade on Riverside drive, another exclusively pleasure parkway.

The officials and guests, who constituted the first division, were followed in order by the

Second division, American gasoline touring cars; Milo M. Belding, marshal.

Third division, American runabouts; Frank Evelyn, marshal.

Fourth division, foreign built automobiles and noted racing cars; Robert Lee Morrell, marshal.

Fifth division, American steam vehicles; Augustus A. Post, marshal.

Sixth division, American electric vehicles; C. H. Gillette, marshal.

The seventh division, for electric cabs, under the marshaling of W. H. Brown, failed to materialize. The eighth division, for business wagons, joined the procession later on as above stated.

But three racing cars were on hand. B. M. Stanley, Jr., had out the 90-horsepower Mercedes record holder he bought from Mr. Vanderbilt. Joe Nelson drove P. A. La Roche's Darracq Blue Streak, and T. Brown piloted D. W. Bishop's Panhard racer.

Slowly the parading line entered the park, headed by two horse-mounted policemen and a squad of cycle cops. A dozen cars containing city officials and guests followed. It was the intention to show the municipal powers the utter absurdity of an 8-mile an hour limit. The horse and bicycle borne pacemakers were evidently leagued either with the authorities to aggravate the automobilists, or had been "fixed" by the committee to play the role of terrible exemplars of slow pace. Not only was 8 miles an hour a maximum rate of



A PART OF THE GASOLINE SECTION OF NEW YORK PARADE LINED UP FOR THE START

ging most of the way, but it more often dropped to a crawl of 5 miles an hour. This rate of speed prevailed until the north limit of the park parade was reached, and when the sheer desperation the pace was quickened to an endurance 10 and 12 miles an hour.

It was a good lesson even if it did tax the patience of the paraders.

As the procession proceeded, though, there were some impatient breaks from the line, and at times on the Riverside drive there was a jam of cars from curb to curb.

Shortly after the entry of the parade into the park the rain ceased, but the dark clouds and misty conditions continued. It was tough crawling up the hills through the mud. Occasionally an engine which had been allowed to cool became overheated and necessitated a

ing cars, sixteen American runabouts, twenty imported cars; then a mixed assortment of "butterflies" made up of all classes; twenty-four White touring cars in solid phalanx as one sees the Whites always in the endurance runs, followed by sixteen steamers of other makes, and last of all, the seventy-three business wagons heretofore noted.

On the homeward way the paraders became somewhat restless. Many left the ranks altogether or joined the escorting squadron of outsiders that drove alongside the regular procession. The return route was by way of Seventy-second street, West End avenue, Broad way, Fifty-ninth street and down Fifth avenue to Twenty-sixth street, where the remnants of the procession disbanded.

There was an attempt on the way down Fifth

inler automobile motor of 120-horsepower. Mr. Hope estimates that the hulls of the boats he is designing, despite the powerful machinery they will carry, will weigh something over 700 pounds. He expects that the winning craft will have to make close to 30 miles an hour, whereas the Napier's best speed, which sufficed to win all its races, was 22 miles an hour.

S. F. Edge will have the old Napier and is also building a 40-foot bronze craft which will be engined with a 120-horsepower, four-cylinder Napier motor. A third boat will be a 35-footer of 80 horsepower.

Besides the Hope and Edge entries, the Thornycrofts will have a light steel motor boat of heavy power, while Lord de Walden will also spring something of a surprise in the way of a boat to contest for the international cup. There is great rivalry between this concern and the Yarrow company, the builder of the Edge boats, so it will be small wonder if something fast is produced.

The great French steam advocate, the Gardiner & Threlle company, is putting into a boat a steam outfit which is to develop 150 horsepower.

The race for the cup will take place on the Solent, July 30, over a course of 12 nautical miles. But before it occurs the trial races



helpless one was gazed by the whole line until he cooled off and chased back to his place in the parade.

As the procession moved out of the Seventy-second street gate of the park and moved across to the Riverside drive the largest, most varied and most interesting division of the parade fell in—the commercial vehicles. There were seventy-three of them—fifty-nine electric cars, three steam, nine gasoline and two tractors, with gasoline and electricity combined. They constituted an exposition of the many uses to which automobiles may be put in business. There were trucks for all purposes, department store and bakery delivery wagons, undertakers and florists' vehicles and a theatrical show advertising panorama. It was really a revelation of the extent of the use of vehicles in this city for commercial purposes. The Vehicle Equipment Co., the Electric Vehicle Co., the Pope Motor Car Co., the Knox Automobile Co., and the Ohio Motor Works were represented.

With the reaching of the Riverside and the partial appearance of the sun came scores of well laden pleasure automobiles out to meet the parade. So it was that the drive became gay from curb to curb with motor vehicles.

As the procession countermarched the Metropolitan Astor man made a count, though he confided to the possibility of having mixed in some of the outsiders with the paraders. There were eighteen cars about equally divided between domestic and foreign, devoted to the officials and guests; twenty-four American tour-



THE NEW YORK PARADE IN PROGRESS

venue to keep half the street clear for the paraders; but before many blocks had been traversed cabs and carriages butted in and very much marred the continuity of the procession. It had been arranged to have the street cleared, but the parade got back nearly 2 hours behind time, owing to its late start and slow progress. The route was 12 miles in length. It had taken 2½ hours to cover it.

#### BUILDING RACERS ABROAD

Great Britain is making elaborate preparations to defend its title to the Harmsworth international cup, which was won last year by S. F. Edge's Napier. Linton Hope, well known as a designer, and secretary of the Marine Racing Association, has already designed three boats to be built by the Hutton Motor Co. and which will be entered in the elimination races. One is to have a six-cyl-

among the aspirants for the honor of defending the cup will show what speed can be got out of them.

The makers have this year not only greatly reduced the weight of hulls, but have practically doubled the power. Napier was fitted with a 68-horsepower motor, while most of the new 40-footers will have at least 120 horsepower, so that extreme speed is anticipated.

A great boom has struck English and French boat shops, and, as in America, there is now an immense demand for motor boats of all sorts and sizes and for all purposes. The racing craft have been the means of advertising to the world not only the reliability of the gasoline motor, but the enjoyment to be had in motor boating—thus the boom, which must soon extend to the commercial world in even a more substantial manner than ever before.



## THREE CARS ENTERED

### Winton, Peerless and Christie Machines To Be Tested for the Gordon Bennett Cup Race

New York, May 2—Entries for the American team in the international race closed today. There are three candidates to be submitted to such structural examination and speed and endurance tests as the racing committee of the Automobile Club of America may demand.

Walter Christie formally entered this morning at the club the car of his own make and design, which was one of the competitors at Ormond last winter.

Peter Cooper Hewitt formally withdrew on Friday the candidate he has been building at the Trenton Iron Works, frankly stating that in its present state he did not feel justified in offering it for a place on the team.

Alexander Winton's Bullet 11 and Louis P. Moores' 1904 Peerless racer had already been formally entered.

Dave Hennen Morris, George Ishaff Scott and W. Gould Brokaw, the three active members of the club's racing committee in the absence of its chairman, O. W. Bright, who is ill and unable to do any committee work, on the receipt of Mr. Hewitt's withdrawal promptly made announcement that they would leave this city on Wednesday night for Cleveland, where they would examine the Winton and Peerless candidates and submit them to such speed and road tests of not less than 100 miles as might be deemed necessary to determine their selection or rejection as members of the American team in the cup race. President Scarratt, ex-President Shattuck and William Golshall, a mechanical expert, will accompany them.

It was said at the club today that there would be no meeting of the committee before its departure for Cleveland and that the testing of the Christie car would not take place until the Cleveland trials had been completed.

The Bullet and its performances are well known. What results have been obtained in the matter of possibly increased speed and strength by its recent remodeling following the breaking of its crank shaft at Ormond remain to be seen.

The new Peerless has been already fully pictured and technically described. Mr. Moores is sure that his latest creation is a great improvement over last year's cup candidate. That, too, remains to be demonstrated.

The entry of the Christie intersects a new factor that will start cup-chance discussion going afresh. All things considered it has made a showing entitling it to consideration. In kilometer trials at Ormond it scored 38 3-5, 36 4-5 and 37 3-5 seconds, respectively. In making the last two records it made 1:01 1-5 and 1:00 for the mile. In the 10-mile open it covered the distance in 9:35, being beaten by four Mercedes cars, as follows: W. K. Vanderbilt, Jr., 90 horsepower, 6:50; S. B. Stevens, 60 horsepower, 7:02 1-5; L. H. Bowden, 60 horsepower, 7:08; J. L. Breese, 40 horsepower, 9:29 1-5. The program-rated power of the Christie car is 30 and its weight 1,272 pounds, as against a range of from 2,000 to 2,375 pounds for its opponents.

It was also a starter in the 20-mile handicap, but did not finish. Its time, though, is said to have been 7:26 for the first 10 miles—a rate of 46 2-5 seconds for the mile and of 80 miles for

the hour. It would seem from this that the car had speed enough for a long distance cup candidate.

Since the Ormond meet the engine has been rebuilt until now, it is claimed, it will show 40 horsepower. Its present weight is given at 1,250 pounds. The car is of novel and radical construction. One casting forms the front of the machine, supporting the full weight of the engine on the axle. The engine drives direct without any gears intervening. The motor is a four-cylinder vertical. The construction is based on the theory that it is better to drive a car than to push it from behind. The steering is in the front wheels.

Walter Christie proposes to drive the car himself. He is the president of the Christie Iron Works, of this city, and is also known to fame as the inventor of the mechanism used in operating the turrets of the American battle-ships.

It was said at the works today, in reply to the Motor Age man's questioning, that the car had had many speed trials on Long Island and Staten Island roads and that it had been timed at a rate of 85 miles an hour. It was also said that the present car had withstood all the hard use and abuse



WALTER CHRISTIE ON HIS RACER

to which it had been subjected in these trials without showing any weakness; and that the absence of vibration was a noticeable feature of its running.

There is a strong feeling among the few who have studied the car and followed its recent trials, that Mr. Christie has evolved a sturdy and speedy candidate for the cup.

Just what will be the test to which the candidates will be submitted the committee refuses to say.

"To publish what the plans of the committee are in this respect," said an official of the club to a Motor Age man today, "might through publicity defeat their being carried out. The committee fully realizes its responsibility to the American sport and industry in the matter of the selection or rejection of the candidates. If the team fails to make a creditable showing in the race it will be up to them for recommending the club's indorsement. In view of this, can there be a stronger incentive for as thorough a test as is practical or a better assurance to the public that it will be made?"

Secretary Butler will accompany the committee to Cleveland. William P. Kennedy, a consulting engineer, will also go in an advisory capacity. Mr. Kennedy, in partnership with Mr. Berg, a brother of Hart O. Berg, has a consulting engineering office at 503 Fifth avenue.

## NEW HUB-GOTHAM MARK

### Figure of 9 Hours 57 Minutes Made by Harry Fosdick Under Most Adverse Conditions

Boston, May 2—A new automobile record, from Boston to New York was established by Harry Fosdick Tuesday and Wednesday last. In securing the record, Mr. Fosdick broke the one established by himself in October, 1902, when he made the trip in 10 hours 5 minutes actual riding time, and 13 hours and 30 minutes elapsed time. Mr. Fosdick then went out with the idea of securing the round-trip record established by Mr. Skinner in November, 1902, but made no special preparations. Taking his 1904 Winton he pulled out of Boston at exactly 2:30 o'clock Tuesday afternoon, when storm was threatening. Believing the storm only a shower, he got under way and reached the Old Weymouth inn at 3:23. An hour later the machine went through Marlboro at a reasonable rate of speed, but once the other side of Marlboro the speed was increased, Worcester being reached at 4:05.

Three minutes were spent in Worcester replenishing oil tanks and then the start was made for the western section of the state. It was an hour later that the town of Warren was reached, and at 5:57 Springfield was the stopping point for a period of 8 minutes. The riding time to this city was 3 hours 24 minutes, which is the best time that has yet been recorded between the two points. The roads up to this point had been fairly good, as shown by the time recorded, but going through the Connecticut valley region things changed considerably. The footing all the way to Hartford was poor, and a mist hung over the land. Hartford was reached at 7:10 o'clock. Here for the first time since leaving Boston Mr. Fosdick and Mr. Shaw, his companion, got out of the car, for supper.

The party left Hartford at 8:22 o'clock, after a rest of 1 hour 12 minutes. The night was dark and misty, the powerful rays of the search light attached being necessary to penetrate the darkness. New Haven was reached 2 hours later, and 15 minutes were spent here. Bridgeport was reached in due season, and it was midway between that city and Norwalk that the automobilists heard the bells in the church steeples announce the midnight hour. At the latter place a lunch cart was called on and after a stop of 15 minutes the rush to New York was again taken up at 12:35 a. m. The ride from Norwalk to New York was interesting. The moon was far away, and had it not been for the lights on the car the road would have been missed. Fortune favored the men, however, and at 2:35 a. m. the car rolled over the Third avenue bridge, exactly 11 hours 55 minutes after leaving Boston, which was 1 hour 35 minutes better than the elapsed time on the previous ride. The actual time of riding was 9 hours 57 minutes and a gain of 5 minutes over the previous record, also established by Mr. Fosdick. Mr. Fosdick continued his drive to the Fifty-fourth street garage, which was reached at 2:45 o'clock.

At 4 o'clock that same morning the party again started out, this time bound direct for Boston. It was then raining, but the tourists thought it only a shower and so kept up. The going, however, was harder than imagined, the rain having turned the roads into quagmires, with mud and water running over the rims.

and after the hardest kind of work New Haven was reached at 8:30 o'clock. It was then seen that the weather conditions prevented a possible road trip record, so the party took it easy and at 1:20 o'clock the car pulled out of New Haven and started for Hartford, which was reached at 4:45 o'clock.

It was determined to put up here for the night. Thursday morning it was raining just as hard, but seemed to clear up about noon. It was decided to make a run for home, and so at 1:30 Thursday afternoon the start was made. The trip through the Connecticut valley was difficult in the extreme, the roads being miniature rivers, with water in places reaching up to the step, but even with that Springfield was reached at 3:45 o'clock. Thirty-five minutes were spent here and then another stop was made for home. Two miles west of Palmer the first accident of the trip was experienced. This was a puncture in one of the front tires. An hour later Warren was reached and here an hour's rest was enjoyed. Worcester and the state roads were encountered at exactly 10 o'clock, and Boston was reached at 12:20 in the morning. The going on the half of the trip was disagreeable and had to be made with caution. Harry Fosdick feels well satisfied with the performance. On this as on his last trip he took occasion to have the time of his arrival and departure from the several cities properly recorded, so that should occasion require he will have absolute and indisputable proof of the time made.

#### BUFFALO CLUB PLANS RACES

Buffalo, N. Y., May 2—The first run under the auspices of the Buffalo Automobile Club will take place Saturday next. It will form at the city hall and will proceed through some of the principal thoroughfares to Hamburg, N. Y., where dinner will be served at 6:30. It is the intention to get as large a turnout as possible for the parade. The club house will be ready for occupancy about the middle of the present month and the opening of same will be a ladies' social tea in the afternoon and in the evening a stag with a vaudeville show and, of course, refreshments. The committee on tours held a meeting at the Iroquois and in addition to the first run and program for opening of the club house it was decided to have a stag run to Rochester June 18. It is the intention to leave Buffalo at 1 o'clock in the afternoon and allow 5 hours for the trip. The Syracuse Automobile Club will be invited to meet the Buffalo delegation at Rochester and the Rochester automobilists will be asked to arrange the program for Saturday evening and Sunday. It is proposed to leave Rochester on the return trip Sunday evening about 6 o'clock. The distance between Buffalo and Rochester is about 72 miles.

The Buffalo Motor Cycle Club will hold its first annual election Thursday evening next. The nominating committee has placed the following on the ticket: President, Dr. Marshall Clinton; vice president, F. H. Loverin; secretary-treasurer, Dr. Carlos E. Cummings; captain, J. C. Knapp; engineer, Clarence Becker.

The Buffalo Cycle Trade Association, in addition to the handicap bicycle road race Decoration day, will also conduct a motor cycle road race, but plans for the same are not completed. The association has left the matter in the hands of the Motor Cycle Club. George Hendee, manufacturer of the Indian Motor Cycle, has donated a silver cup as one of the prizes.

## WILL PARADE FOR BABIES

### Cleveland Automobilists Will Assist in a Motor Car Field Day for Benefit of Kindergarten

Cleveland, O., May 2—The automobile will have full sway in Cleveland on June 8. The event will be a spectacular parade of automobiles followed by pageant at the Glenville track, the like of which has never been seen in this country, it is claimed by the promoters. The Cleveland Day Nursery and Free Kindergarten Association, one of the best known benevolent societies in this city, is responsible for the plan.

Each year the association, which is headed by a number of well-known society ladies, gives an entertainment, the proceeds of which are devoted to the work of the organization. This year some of the ladies branched the subject of an automobile outing to members of the Cleveland Automobile Club and the scheme met with prompt offers of assistance. Several prominent members of the club have taken up the work of arranging for the affair and altogether it promises to be a huge success.

The opening feature of the day will be an automobile parade from the public square to the Glenville track. Every one of Cleveland's 1,177 automobilists will be invited to participate in the parade as well as in the events which will follow at the track.

The track program has been prepared by George Collier and it embraces a number of novel and interesting features. The first event will be the finish of the parade which will be on the track, the cars circling the big oval, four abreast. The second event will be a quadrille in which four little boys and four little girls will operate Baker runabouts through the figures of this event. Mr. Baker will be in charge of the event and will spend considerable time in drilling the performers.

The third event will be an obstacle race of a quarter of a mile. M. L. Goss will be in charge of arrangements. Then there will be a slow race for high powered cars. The rules will specify that the high gear must be used throughout, and the motor must not be stopped. This will give manufacturers a good opportunity of demonstrating the possibilities in throttling their motors. The fifth event will be an exhibition by inventors of racing cars. Among those expected to participate are Alexander Winton, with one of the Bullets; Walter Baker, with one of the Torpedoes; L. P. Moores, with a Peerless racer; Frank B. Stearns, with a Stearns racer, and Rollin White, with one of the White steam racers. Some out-of-town inventors may be requested to participate and it is quite probable that a race will be arranged for some of these cars.

There will be a floral parade in which several prizes will be given for the best decorated cars. This event will be in charge of the runs and tours committee of the Cleveland Automobile Club, as will also be the arrangements for the parade. The seventh event will be an exhibition of old and new machines. Winton, White, Moores, Baker and other manufacturers will be asked to operate the first machines they ever built and alongside of these cars will be samples of the latest models of these makes, presenting an interesting contrast.

After that there will be a 4-minute race with a prize to the person making a mile the closest to 4 minutes; no watches allowed. The ninth event will be a starting and stopping race, each car to have three passengers. Each car will come to the tape and unload passengers and the motors be stopped. At the pistol the passengers will load and the machine be started. This will be repeated at each quarter and the winner will be the operator who first has his machine at a standstill and the crew unloaded at the tape. The tenth will be a brake contest, the details of which have not yet been arranged, and there will be other events which are yet to be arranged.

The executive committee of the Cleveland Day Nursery and Free Kindergarten Association, to whose enterprise the project owes its being, is composed of the following ladies: Mrs. M. E. Rawson, chairman; Mrs. William McLaughlin, secretary; Mrs. A. C. Dustin, Mrs. George A. Garretson, Mrs. James A. Stephens, Mrs. Harvey D. Goulder, Mrs. James J. Tracey, Mrs. J. Homer Wade, Mrs. Luther Allen, Mrs. Oscar J. Campbell, Mrs. Gay Gray, Mrs. Henry R. Hatch, Mrs. Howell Hinds, Mrs. S. A. Raymond, Mrs. Carlos M. Stone, Mrs. Dustin is chairman of the sub-committee having the field day directly in hand, while Mrs. James A. Stephens is chairman of the committee whose duty it will be to invite Cleveland motorists to participate in the parade.

#### INDIANAPOLIS OBJECTS

Indianapolis, Ind., May 2—An endeavor is being made by the Automobile Club of Indiana to have the run from the east to St. Louis, Mo., pass through Indianapolis. The New England motorists will cross New York state and go to Pittsburgh, while the New York and New Jersey contingent will join the former excursionists at Albany, N. Y., while the tourists coming from Virginia, Maryland and Delaware will meet the others in Pittsburgh.

At present it is the intention of the eastern motorists to go from Pittsburgh to Cleveland by way of Toledo and along the northern boundaries of Ohio and Indiana to Chicago, where the delegations from Illinois and Wisconsin will join and then the entire caravan will go to St. Louis.

The club and drivers all over this section believe the national run from the east should come through Indianapolis, by way of Columbus, O., and Richmond, Ind., thence to St. Louis, passing through Terre Haute, Ind., because of the fine highway offered by the national pike and the fact that the northern road is sandy and muddy. George E. Varney and William Moneypan, of Columbus, O., who is the district member of the American Automobile Association, have been appointed to take up the matter of change in the route with the organizers of the run.

The annual election of officers of the club was held last week at the Commercial Club, and the following directors and officers were named: Directors, Howard Marmon, Alfred A. Barnes, Fred Ayres, George Pangborn, William Fortune, H. O. Smith, Gordon E. Varney, George Gay and Charles Sommers. William Fortune, president; George A. Gay, vice president; Gordon E. Varney, secretary-treasurer. There is talk of getting a new house and a garage, as the present accommodations are not adequate for the steadily increasing membership list.



## CHICAGO PLANS PARADE

### Local Motorists Want 1,500 Machines In Line—Club Run Well Attended—Fatal Accident

Chicago, May 3.—If the plans now under consideration are carried out Chicago is to have an unsurpassed automobile parade about the middle of this month. Local motorists believe a promenade of about 1,500 motor cars through the principal streets of the city would have a far-reaching effect upon all classes of people. It would show that the automobile industry is rapidly gaining a leading place among the great industries of the country; that the newer method of transportation is making converts almost every hour; that there is power and influence behind motordom in a big city; that automobiles can be handled as perfectly as can a horse. President Farson went east especially to see the New York parade, held in the metropolis last Saturday, and Frank X. Mudd is in communication with Emerson Budd, chairman of the committee on runs and tours of the Automobile Club of America, for information concerning the eastern parade.

Highland Park was the destination of the first of the weekly runs which the Chicago Automobile Club has planned. The excursion took place last Saturday and while only fifteen owners of cars responded to the call, it was nevertheless a pleasant and enjoyable affair. There were twelve ladies in the run. By the time the small number of touring cars and runabouts were started, several hundred people had gathered near the club house on Michigan avenue. Among those who took part in the run were: Mr. and Mrs. Frank X. Mudd, Frank Thompson and daughter, Miss N. Ezquize, William McMum, F. L. Donald, Miss Lark, Sidney S. Gorham, the "Honorable" Alce S. Ray, mayor of Oak Park, and wife, Mr. and Mrs. Roy Simpson, Dr. and Mrs. Waldo Johnson, Mr. and Mrs. J. B. Burdett, Mr. and Mrs. T. J. Hayman, Jr., and Mrs. A. Frantzen, Henry Ullman, Dr. F. L. Greene, W. G. Lloyd, Ira M. Coke, Jerome A. Ellis, M. K. Frank, W. Leach, M. Keating, J. H. Wyeth, Jr., C. C. and H. J. Clucas.

Every member of the Chicago Automobile Club is now included in the A. C. Banker injunction suit against the city, concerning the numbering of motor cars. Judge Prentano issued an order yesterday which prohibits 236 members of the club. On the other hand, Judge Tenthill added ninety names of owners of automobiles to the list of motorists the police are prohibited from arresting for violations of the ordinance requiring operators to procure licenses.

An accident with fatal consequences occurred Sunday near Chicago Heights. H. S. Ringi, agent for the Rambler in Highland Park, was driving his car in company with his fiancée, Miss Florence Bornholdt, and one of her friends, Miss Elizabeth Caudy. When about a mile from Chicago Heights the party met a farmer's wagon. Mr. Ringi rode behind it for a while and then attempted to pass. Owing to the narrow roadway there was hardly room for two vehicles to pass, and the machine struck the farmer's wagon. In trying to back, and take his former position behind the wagon, Ringi went too far on the side of the roadway and the automobile swerved into a ditch and upset. The two ladies were thrown out of the

car, but Ringi, who had tried to stop the machine, was thrown in the ditch and his car fell on him, crushing him to death.

Since the Eagle Rock and Boston hill climbing contests, there has been some talk of promoting a similar event in Chicago. Hubbard's hill at Glencoe, though some 18 miles from the city, is the only spot that can be called a hill, but as a car would have to be started from a standstill, this would make the contest all the more interesting and would show the ability of the car and its operator to advantage.

There never has been such a contest in this country and Chicagoans feel that it would be a novel and useful trial.

### GETTYSBURG TOUR MAY 26

New York, May 2.—Although it is rather early for many replies to be received to the A. C. A.'s circular letter to its members, announcing the itinerary of the club's spring tour, which will start on May 26 and be to Gettysburg and Harrisburg, Secretary Butler says that he estimates that a minimum of twenty-five cars will take part in it. The itinerary follows:

Thursday, May 26—New York to Philadelphia .....	105
Friday, May 27—Philadelphia to York .....	102
Saturday, May 28—York to Gettysburg .....	40
Lunch at Gettysburg; afternoon to be spent in going over battlefield	
Sunday, May 29—Morning and luncheon in Gettysburg; afternoon, run from Gettysburg to Harrisburg .....	35
Monday, May 30—Harrisburg to Philadelphia .....	108
Tuesday, May 31—Philadelphia to Atlantic City .....	61.5
Wednesday, June 1—Atlantic City to Lakewood .....	67
Thursday, June 2—Lakewood to New York .....	83

Total .....

A representative of the committee is to go over the route this week, after which a circular will be issued giving full road particulars.

### AGREES TO MERGER

New York, May 3.—The directors of the American Automobile Association met today to consider the proposed merger with the American Motor League. Of the mail votes that had been received 1,408 were found to favor the merger and 138 to oppose it. In view of this great majority and the supplementary endorsement of votes not received, which signified consent, there was passed the resolution that the merger become operative subject to the agreement with the American Motor League upon satisfactory constitutions and by-laws.

The directors of the A. A. A. will meet again May 15 to consider the report of the joint committee on constitution and by-laws. This committee is Messrs. Potter and Egan for the A. M. L. and Messrs. Butler and Valentine for the A. A. A. C. H. Gillette was made secretary of the St. Louis tour committee. The tour was given its first beginning by the receipt of the first two formal entries from Windsor T. White and Harlan W. Whipple. William Wallace, of Boston, came to the front as the first entrant for the Vanderbilt cup race, agreeing to abide by whatever conditions are made to govern the race.

It is said that Chairman Pardonington has submitted to W. K. Vanderbilt, Jr., an outline of rules and conditions for the cup race and that the plan and scope of the event will be settled soon. Vanderbilt is to decide whether the contest will be open to the world or restricted to American cars.

## MOTOR BOAT BILL DEAD

### But When Congress Reconvenes It May Be Brought to Life—Full Text of the Measure

Washington, D. C., April 2.—Congress has finally adjourned without taking action on the Grosvenor motor boat bill. It is understood that the bill will be taken up early in the next session and that strong efforts will be made to secure its enactment. While reposing in the house committee on the merchant marine and fisheries the bill underwent numerous changes and in order that MOTOR AGE readers may have a correct understanding of the measure as it will be presented to the house at the next session the full text of the amended bill is herewith given:

"That the act of congress approved Jan. 18, 1897—chapter 61, page 459, volume 29, United States statutes at large—amending section 4426 of the revised statutes of the United States, relating to vessels propelled by gas, fluid, naphtha, or electric motors, be, and is hereby, amended so as to read as follows: 'All vessels or boats carrying freight or passengers for hire, propelled by gas, gasoline, fluid naphtha, electric motors, alcohol, or other like motors, shall be, and are hereby, made subject to all the provisions of section 4426 of the revised statutes of the United States relating to the inspection of hulls and boilers and requiring engineers and pilots. Provided, that the same person may be licensed as both engineer and pilot. And all vessels so propelled, without regard to tonnage or use, shall be subject to the provisions of section 4412 of the revised statutes of the United States relating to the regulation of steam vessels in passing each other, and to so much of sections 4233 and 4234 of the revised statutes relating to lights, fog signals, steering, and sailing rules as the board of supervising inspectors shall by their regulations deem applicable and practicable for their safe navigation. Provided further, that applicants for license to operate and run a boat that comes within the provisions of this section may be examined as to color-blindness, deafness, and general qualifications as to skill and experience by the local inspector at the time and place where the boat is inspected. Provided further, that the supervising inspector shall formulate and adopt such rules for the inspection of vessels or boats coming within the provisions of this act as will insure the structural strength and stability of hull; their safety for use on waters to which adapted; also to require each vessel or boat inspected to be properly equipped with tight and stable tank or tanks for the carrying of the explosive liquid that furnishes the power, the stability and sufficiency of all appliances used in the generating and propelling power; that said vessel or boat shall be supplied with life-saving appliances in like manner as a vessel or boat propelled by steam of corresponding size and use; and the local inspector shall specify the number of passengers that may be safely carried by each boat inspected, and that all the above requirements shall be set forth in the certificate of inspection of each boat, said certificate to be framed and hung in a conspicuous place on board. Provided, that examinations for licenses for pilots and engineers for vessels or boats coming within the provisions of this act shall be limited to the kind and nature of power employed

on such boat or vessel, and a proper understanding of the meeting and passing signals and a sufficient knowledge of navigation to properly and safely run a boat for which a license is granted."

A perusal of the amended bill shows that it is radically different from the one originally introduced. Those who will be affected by the passage of the bill have the entire summer to muster their forces to wage warfare against the measure. If they would defeat the bill they should bring all their powers to bear, for there is no question but that General Grosvenor will strive hard to put his pet measure through.

#### DETROIT A. C. SUMMER HOME

Detroit, Mich., May 2—The Detroit Automobile Club has just made a deal by which it comes into possession of a new country club house located about 15 miles out on Birmingham road. It is a three-story frame building, which, when remodeled, will be a most agreeable place to spend the hot weather. A large dining room, next to a private dining place, and the kitchen, will be located on the main floor, while on the second story a ladies' parlor will be fixed up with a private dining room. In the rear of the second story floor the steward's and his family will occupy three rooms. There is a large barn and a large grove will be efficient for picnics. The immediate neighborhood is picturesque, while the road leading to the house is good and will be steadily improved. The house committee is now making arrangements concerning the finishing touches. Most of the local motorists who have heard of the new acquisition seemed well satisfied and pleased at the idea of being able to rest in the shade in their own home.

While the officers do not intend to have a regular all-hour lunch counter, it is their intention to be able to serve light lunch at any hour and dinner every day at a regular hour. It is generally believed that this scheme will have a good effect and help increase the membership. An effort will be made to reach the 500 membership mark during this season. At present there are about 150 members in the club.

#### DISCOVERED THE TRICK

Providence, R. I., May 2—Now that spring has brought out the usual crop of automobilists on the roads, the police have begun to use some old but effective measures to wean the conviction of those inclined to be too enthusiastic when they come to a smooth road, and it became known about town that there was a certain part of Webster avenue which had been measured. Policemen at each end of the measured section with stop watches completed the arrangement. A newspaper reporter discovered the plot to trap automobilists and in a story told the details, and of the hopes of the police. On that particular portion of Webster avenue automobiles pass with the low speed gears in mesh and going at a rate which is exasperatingly slow.

Secretary of State Bennett has begun to issue certificates to the automobile owners of the state as fast as they apply for them. Up to the present time almost 200 applications have been received, and they come from all parts of the state. The automobilists are taking kindly to the new law and are thankful that no speed clause was inserted which might make touring conditions irksome.

## TRACK SCHEME GIVEN UP

### White Mountain Project of Senator Morgan and Others Abandoned, Temporarily at Least

New York, May 2—Senator Morgan's scheme for a 2-mile automobile track at Bretton Woods, N. H., in the White Mountains, has been temporarily abandoned owing to the objection of the president of the railroad, which was to build it. This the optimistic senator hopes to remove by argument some day. Pending the president's change of heart, however, Morgan now has begun the promotion of a great national hill-climb at Mt. Washington to take place in July.

The idea is to have the cars make the climb of about 8 miles from Glen Ridge Cottage to the summit. The contestants are to be divided into classes, so that stock cars will not be compelled to compete against stripped racers. It is to be practically an 8-mile road race up hill and a mighty good idea it is, too, senator.

Anderson & Price, managers of the Ormond hotel, Florida, and proprietors of the Mount Pleasant and Mount Washington hotels, are backing Morgan in the scheme. By the way, in view of the big increase in the patronage of the Ormond hotel arising from the beach races these popular bonifaces are building a new wing, extending down to the river. This will give a covered promenade and 100 additional bed rooms. A big rotunda is being made and a grill room established in the basement. Two new garages accommodating from seventy-five to 100 machines in all will be built before next winter. Rooms are already being bespoken for race week next January over one-half of them being engaged.

#### QUAKER CITY MEET

Philadelphia, Pa., May 2—Arrangements have now been perfected for an automobile race meet at the Point Breeze track on Saturday, May 28, under the auspices of the Philadelphia Automobile Club and the Philadelphia Automobile Trade Association. The track has been banked after the manner of the old bicycle track, though to a more moderate extent. The date set for the meeting has been timed so as to coincide with the visit of the Automobile Club of America to the Quaker city. The spring tour of the A. C. A. leaves New York Thursday, May 26, arriving at Philadelphia the same evening, and according to the itinerary mapped out should proceed west the following day.

As many members of that tour, however, may prefer to stay over in Philadelphia from Friday until Monday, when the A. C. A. will revisit this city, the race meeting occurring on Saturday afternoon will happen most opportunistically for them.

#### SPEED CASE APPEALED

Washington, D. C., May 2—Counsel for Vincent Walsh, the young son of Thomas F. Walsh, the Colorado multi-millionaire, have filed a motion for a new trial in a higher court in their client's speed violation case. Young Walsh was convicted in the police court on three separate charges of violating the automobile speed laws in his Winton touring car and was fined \$20 in each case. The policeman who preferred the charges against Walsh swore that although he was standing on the sidewalk when Walsh went by in his car, his

long experience in such matters made him positive that Walsh turned the corner in front of him faster than 4 miles an hour, crossed the car tracks at a greater speed than 6 miles an hour, and, turning down a side road, sped away on the level at a rate of at least 20 miles an hour. Walsh denied all these charges and pointed out that his Winton was equipped with a Jones speedometer, which he was watching all the time. In the face of this the court ruled against him. Contending that their client's word was as good as that of a policeman, Walsh's attorneys have formally filed a motion for a new trial. The case has attracted considerable attention among automobilists and the outcome will be awaited with interest.

#### FRENCH MOTOR CYCLE RACE ON

Paris, April 23—The first stage of the motor cycle endurance test has been completed by almost all of the fifty-nine starters out of sixty-five who had entered. The first to reach Tours, 160 miles, was Poulon, on a Bruneau, who covered the route in 8 hours 23 minutes. Inasmuch as racing was prohibited, the drivers remained pretty well bunched most of the time, and only when about a half hour from Tours did some begin to put up the limit of speed permitted according to the regulations.

It is the severest test yet attempted in this country with motor-propelled bicycles, and is watched with great interest by the manufacturers and the public. The majority of people are under a wrong impression concerning the road. They believe it is the famous mandam upon which the annual bicycle race is run, and say that under such circumstances the test loses value, as there is little glory in running a motor cycle over 750 miles over a level road. As with all roads leading to Rome, there are a great many leading to Bordeaux, and that the organizers purposely elected the worst they could find.

There are thirty-five different makes of machines represented among the fifty-nine starters. Among those machines which attracted especial attention before the start were the Knapp, Werner, Bruneau, Clement, Balleu, Gladiateur, Minerva, Luquin & Condert, Carreau, F. N. and Aleyon.

#### WANT RECORDS ABANDONED

New York, May 2—The executive committee of the American Federation of Motor Cyclists has passed the following resolutions, aimed against the competition of heavy powered racing machines with vehicles designed for road use.

Whereas, The table of American motorcycle records, as it at present exists, is unmeaning and misleading, being constituted of performances made on machines of abnormal power and construction, and such as are unfit for practical usage; and

Whereas, In order to conform with the regulations in effect in foreign countries, and for the desirable influence it will exert on motorcycle design and construction and competition.

Resolved, That the National Cycling Association be and is hereby respectfully requested to annul the motor bicycle records as they now appear on its books, and to henceforth entertain and accept no record made on a motor bicycle exceeding 110 pounds in weight.

Resolved further, That the National Cycling Association be and is hereby requested to enact and promulgate a rule or resolution that on and after January 1 next no motor bicycle exceeding 110 pounds in weight be admitted to open competition.

When shown these resolutions, A. G. Batchelder, president of the N. C. A., said that they seemed reasonable.

## MANY NEW REPAIRERS

### This Branch of the Trade Increases Rapidly At Cleveland—E. J. Pennington's Latest Failure

Cleveland, O., May 2.—The number of repair people in Cleveland has increased at a tremendous rate now that bright weather has set in. Within the last couple of weeks half a dozen new concerns have started in business in various parts of the city until the game is getting to be almost as popular as was the repair business in the old bicycle days. Among the new concerns are the following:

H. A. Steere has opened the Steere Automobile Repair Shop at 182 Lincoln avenue, where he will do general repairing, storing and charging.

R. H. Gilbert has opened the Automobile Exchange at 574 Prospect street. Mr. Gilbert was formerly in charge of the repair shop of the Cleveland Automobile & Supply Co., and is an expert machinist. He will do general repair work, rebuilding, charging and store cars, and will also handle second-hand machines.

E. Gairing has a new repair shop at 23 Townsend street, where he will do general repairing and where he expects to build several cars this season, embodying some new invention which he has recently developed.

R. H. Magoon, agent for the Pope-Toledo car, is enlarging his Euclid avenue garage by the erection of a building 56 by 70 feet, which will be fitted up as a repair shop.

The Central Garage Co., East Prospect street and Watkins avenue, has taken the agency for the Marr car. The concern is headed by Frank R. Blackmore and Edward Striebing, old timers in the bicycle game.

The growing business of the Automobile Garage & Repair Co. has made it necessary to move into larger quarters. The company has leased a large building on Huron street adjoining the Winton branch, which will be fitted up as one of the finest garages in this section of the country. The company is Ohio distributor for the Autocar and has sold nearly 100 of these machines since the first of the year. It also handles the Packard and the Pope-Waverley electric and is state distributor for the goods manufactured and imported by Emil Grossman.

A new branch of the automobile business has been developed in this city this spring—that of the broker in new and second-hand automobiles. The business is conducted similarly to the real estate business. The broker secures lists of cars that are for sale and by advertising, soliciting and all around hustling, he brings buyer and seller together. Frequently a man who does not know anything about automobiles and desires to secure a good new or second-hand machine will apply to the broker for advice on the purchase of a car. On the whole the business seems to be a profitable one.

The regular dealers are willing to pay something to the person who will bring in a customer and help sell a car, while the "rake-off" on a second-hand car is sometimes quite large. The business requires little capital and there is no risk, either for carrying or in guaranteeing cars. One of the most progressive of these brokers is Harry B. Robinson, 404 Cuyahoga building. Another man who makes a business of selling cars on a commission basis is George H. Bowler, 503 Williamson building. For a number of years Mr. Bowler has con-

ducted a similar business in the sale of new and second-hand machinery and he has a wide acquaintance. He also has a warehouse where cars may be stored and displayed. Seymour Bros., Chamber of Commerce building, carry on a business of a similar nature.

A petition in bankruptcy has been filed against the Cleveland Motor Co. This concern was formed some months ago by E. J. Pennington, a personage who has gained much notoriety in various parts of this country and abroad through his attempts to exploit air ships, war automobiles and other extraordinary inventions and stock companies. The Cleveland Motor Co. fitted up palatial offices in one of the leading office buildings of the city and advertised a stock proposition on several inventions which it was claimed would revolutionize the automobile industry. One of these was a fore carriage or gasoline motor which could be attached to any type of vehicle. Another was an immense touring car said to develop 300 horsepower, carry twenty-eight passengers, have sleeping compartments and other unusual features.

The Cleveland Motor Co. succeeded in inducing two local manufacturing concerns to manufacture the two styles of machines. One of the concerns built several of the fore carriages and although they were very freely advertised in the daily papers, it is evident that they did not strike the popular fancy, as it is not known that any of them were sold.

### N. A. A. M. INCORPORATED

New York, May 4.—Five meetings of the members and directors of the National Association of Automobile Manufacturers were held here in quick succession today in order to complete the winding of the red tape necessary in the incorporation of the association.

First the incorporators of the N. A. A. M., incorporated, held a meeting at which members of the N. A. A. M., unincorporated, were elected to membership in the N. A. A. M., incorporated. Then followed meetings of the members and executive committee of the old association, at which the formalities incidental to the transfer of the affairs of the old to the new body were gone through with.

Later the members of the new association met, agreed to take over the affairs of the old one, adopted a constitution and elected an executive committee, comprising the members of that committee of the old body. The executive committee of the N. A. A. M., incorporated, finally met and elected as officers of the said N. A. A. M., incorporated, the honorable gentlemen who had served in like capacity in the N. A. A. M., unincorporated. All of the committees were also re-elected.

The old new executive committee having thus finally throttled the life out of the N. A. A. M., unincorporated, took up the routine work where it had been left before the funeral.

The freight rate committee reported that a brief had been prepared and had been presented to the railway official classification committee. The St. Louis exposition committee reported that so far as preparations made by the association were concerned everything was complete and that a presentable display of automobiles would be installed by the end of the week.

The show committee made a lengthy report, action on which was deferred until the June meeting, which will be held June 1 at the office of the association in the transportation building at the St. Louis exposition.

## NEW PRODUCING CENTER

### Indianapolis Claims To Be Important Motor Car Manufacturing Place—Retail Trade Also Thrives

Indianapolis, Ind., May 1.—In justice to this city it must be said that few localities outside of Detroit, Cleveland and Buffalo are at present more prominent in the producing of automobiles than the Indiana metropolis. A fact which is probably little known is that one of the first automobiles imported from abroad was purchased by an Indianapolis motorist, S. D. Pierson, and it is even claimed that his car was one of the three first foreign automobiles seen in the United States.

It was a Benz gasoline machine, similar to the one exhibited at the Paris World's Fair in 1891, where a friend of Mr. Pierson saw it and then suggested to the latter to get one. Pierson relates that when the car minus the horse came to town there was not a soul who knew how to operate it and try as hard as they could it was not possible for the "experts" of the time to get the foreigner going. It was necessary to write to Mannheim for instructions. Charles Black was the first one able to drive the car, which was shown all over the states.

Since that time motoring here has progressed, slowly at first, and remarkably fast in recent years. This season from 1,500 to 2,000 cars are being made by the 800 workmen employed in the local factories. There are five of these: The National Motor Vehicle Co., the Premier Motor Car Co., the Marion Motor Car Co., the Pope Motor Car Co. and the Nordyke-Marmor Co.

The National Motor Vehicle Co., which was organized in 1899, is located at Twenty-second street and the Monon railway. There are about 250 men employed in the factory, which expects to turn out about 750 cars this year. Plans have been prepared to enable the concern to manufacture 1,500 automobiles next year.

The Premier Motor Car Co., on Fort Wayne avenue, expects to turn out about 250 cars this season and will arrange to manufacture 1,000 next year. The Marion company has just entered the field after having tested a number of sample cars during several months. It is likely that not more than 100 cars will be manufactured this season, but it is expected that from 300 to 500 cars will be finished by the concern next year. The factory is located at Fifteenth street and the Big Four tracks.

The Pope Motor Car Co., which has the old Waverley bicycle factory, is busy making the Waverley electric cars. The plant is now being fixed up and after many changes and additions have been completed the Pope company expects to run about 800 workmen. The Nordyke-Marmor Co. built only six cars this season, which are used for testing purpose. A new four-cylinder air-cooled gasoline touring car is being developed now.

At present the factories are overflooded with orders and are not in a shape to turn cars out fast enough to suit their agents. The city trade is very brisk and it is figured that about 150 new cars will be owned in town before the end of the year. This would bring the total number of automobile owners to close to 400.

The Gibson-Short Cycle and Automobile Co. is one of the latest concerns to engage in the

retail automobile trade. It was organized last February. A new salesroom has been opened by the company on Massachusetts avenue. The Indiana Automobile Co. has found it necessary to enlarge its present establishment and others will probably imitate at the end of the season.

"The farmer is not only taking hold of the automobile," said Munger F. M. Martindale, of the Indiana Ford Co., the other day, "but he is showing how economically it can be run. The farmer does his own cleaning, most of his own repairing, and the expense is limited to about the cost of the gasoline and the oil that he uses. I do not believe that the automobile will ever be used by farmers to take the place of wagons for hauling, but the farmers are finding out that the automobile is the thing for visiting, hurried trips and pleasure. We are selling a great many cars to farmers. The outlook for the season in the city is very encouraging and the only trouble the dealer has to reckon seriously with is the impossibility in getting all the cars he wants and needs. We could sell double the number we will be able to get."

Indianapolis merchants have been slow to recognize the efficiency of the motor vehicle for commercial purposes, but its asphalt streets must eventually be the means of bringing about a change of heart.

#### FRISCO TRADE MATTERS

San Francisco, Cal., April 29—Charles Gerd, special representative of the Winton Motor Carriage Co., who has been visiting Winton agencies and branch houses between Cleveland and San Francisco during the past 16 weeks, returned to Cleveland last Sunday. The larger part of the 10 weeks was spent by him with the Pioneer Automobile Co. here and at the Los Angeles branch house.

The Mobile Carriage Co. had the distinction of furnishing the automobiles which gave Prince Pu Lun, of China, the first taste of the novel method of locomotion. By special permission the automobiles were run to the mail dock and the nephew of the emperor of China and his suite stepped from the steamer into the motor cars.

The Pope-Toledo Touring Car Co. will take over the establishment of the National Automobile Co. and will handle Pope motor cars exclusively. Over twenty-five orders have already been taken for the big four-cylinder car, which is in great demand. The company will run a shop and garage under the management of Gus A. Boyer, formerly of the National Automobile Co.

Fred A. Jacobs, of the Rambler agency, has left for Kenosha. He will try through a personal visit and talk with the higher officers of the company to secure more shipments for this city. The Rambler agency has recently secured the agency on the Pacific coast for the National touring car.

At a meeting of the race committee of the Automobile Club of California, May 28 and 30 were selected for the race meeting and show planned some time ago. The show will be held under the grand stand at the Ingleside race track, where the betting ring is usually located, and the grand will be divided into forty spaces.

The program for the races has not been completed, but an endeavor will be made to induce eastern drivers to come for exhibition drives if not races. It is likely that on Sunday, May 29, a run in the neighboring country will be arranged.

## STREET CARS HARD HIT

### Pittsburg Concern To Inaugurate Extensive Motor Vehicle Business for Passengers and Freight

Pittsburg, Pa., May 2—The most important development in automobile affairs this spring in Pittsburg is the launching of the Auto Traffic Co., for which stock is now being subscribed. The company has been chartered under Pennsylvania laws to operate motor vehicles and has an initial capital of \$200,000 divided into 20,000 shares.

The company proposes to operate first on the so-called Liberty lines in the Squirrel Hill and Morningside districts, and the Peoples lines, East Liberty and downtown. Free transfers are to be provided on all lines. Thirty-five miles is given as the probable mileage at the start, of which 15 will be for passenger lines. Forty vehicles will be run at first, fifteen for passengers and twenty-five for express service. Barn room has already been secured for eighty vehicles.

It is proposed to give express service hourly if necessary. The system includes both the horse and electric methods and will be followed later on by a freight service. It is estimated that a car will carry a maximum passenger load of sixty persons, ninety persons an hour, or an average of thirty persons an hour, making the average hourly earnings \$1.50. Twelve buses will be put on to run 18 hours a day each and have two crews. As the company will be at no expense for franchises, tracks, wires, power stations or politicians, it is thought that more than 50 per cent of the gross earnings can be saved.

Ten vehicles will be started in the express business, making 10 hours a day. These will earn, it is believed, \$15 each per day. According to these figures the promoters say they are sure of total yearly net earnings of \$82,605, or over 40 per cent on the initial capital, or about \$4,000 per mile per annum.

Pittsburg offers many advantages to such a company if carefully operated. Its street car service is probably as bad as that of any city in the country, for the lines are completely in the hands of corrupt politicians or companies which receive all their assistance from them. There are a half dozen cross town routes where street car lines or means of travel of some sort are badly needed, as it now costs 10 cents to get across, besides a wait of an hour or more frequently. The Auto Traffic Co. proposes to establish four different kinds of service as experiments. First, the American plan, without limiting the number of passengers, at a 5-cent fare; second, the European plan, with a seat guaranteed, at one and a half times the first fare; third, the school and works plan, of special service at special rates, for morning and evening hours only, also for amusements, churches, etc.; fourth, the club plan, for exclusive service at certain routes, for neighbors combining for any purpose.

#### MANY CHICAGOANS MOVE

Chicago, May 3—There have been many trade changes in location within the last two days, and Michigan avenue more than ever looks the real center of automobile trade within the three blocks from Thirteenth to Sixteenth streets. There are a number of stores outside of this territory, but the majority are located within a rather small radius on the avenue, where now no vacant stores exist.

F. P. Halsey's new store at 1329 Michigan avenue is not yet completed, but the agent for the Peerless cars is there and the Peerless machines are on exhibition. The Automobile Supply Co. has moved to 1339, and while the painters are still busy in fixing up the outside, business goes on inside as usual. The home of the White steamers is at 1404, the store formerly occupied by Parlee & Co., who have moved into the old Winton store. The new building which the Winton Motor Carriage Co. is having erected at 1251 will not be ready for a while, and in the meantime temporary offices were secured with the Hayden Automobile Co. at 1337.

Ralph Temple vacated his store at 293 Wabash avenue and has moved into the new place at 309, which is one of the finest show rooms in the country. The Greer Automobiles Co. has moved from Wabash avenue to 1421 Michigan avenue and has secured the agency for the Crest. The Knox Automobile Co.'s agency will also join the Michigan avenue brigade, but not before the latter part of June, when the building now being built next to the new Winton location will be ready.

Arthur G. Bennett, the local agent for the Premier car, has secured the agency for the Mitchell runabout. The Cadillac Co. received a Clement-Bayard car last week. This is the first of these French made vehicles in Chicago.

T. L. Tincher, manufacturer of the Tincher car, is building a racing machine which he hopes will prove fast enough to travel a mile in less than 30 seconds. It is the intention of the local maker to build a motor of 140 horsepower, capable of driving the car at the rate of 144 miles an hour. The cylinders will be 7 by 8 inches, and the car is expected to be ready in July. If it proves satisfactory the racer will be entered in the speed trials at Ormond, Fla., next winter.

The Royal Automobile Co., of Harvey, Ill., has opened an office and show room at 425 Wabash avenue, where it is showing different styles of electric cars and a gasoline touring car with 16 horsepower opposed motor. One of the electric machines is a very small and smart looking runabout. The company was organized last year.

#### CAPITAL TRADE CHANGES

Washington, D. C., May 2—An important change took place last week when W. J. Foss was promoted from the management of the Washington branch of the Pope Mfg. Co. to the general management of the Pope interests in Providence, Newport, and adjacent territory. The local management has been placed in the hands of C. Boyce Hough, who was formerly connected with the local Pope branch, but who for the past 2 years has been with the Waverley factory. Mr. Foss has been manager of the Pope branch for the past 6 years and made a splendid record. He was prominent in all movements tending to better trade conditions and to push automobilizing to the front. His promotion to the management of the Rhode Island branches of the Pope Mfg. Co., while a well-deserved one, is a distinct loss to the Capital city, where his influence was most potent. His successor, Mr. Hough, brings to the position an intimate knowledge of automobile affairs and a host of friends bespeak for him a fine record. Previous to Mr. Foss' departure for his new field the staff of the local Pope branch tendered him a most enjoyable farewell dinner at the Villa Flora club.

# THE READERS' CLEARING HOUSE

## IGNITION PRESSURE

Lowell, Mass.—Editor MOTOR AGE—Which air-cooled cylinder would keep cool the best, one 3½ by 3½ inches, or one 3½ by 5 inches? What should be the ignition pressure in a cylinder having 80 pounds gauge pressure? To what degree can compression be carried without causing premature ignition?—THOMAS McNAMARA.

The 3½ by 5-inch motor would cool better. With 80 pounds gauge pressure, the ignition pressure would be about 302 pounds. The permissible degree of compression in any particular motor depends upon the efficiency of the cooling apparatus, compression, projecting surface in the cylinder, and motor speed, so no exact pressure is universal regarding premature ignitions.

## HARDENING GEARS

Attica, N. Y.—Editor MOTOR AGE—What is the best process of hardening soft or mild steel gears for a sliding gear transmission set? Why are No. 6 pitch teeth being used commonly now instead of teeth of No. 8 pitch as formerly?—F. R. D.

Fill the hole and all parts to remain soft, with fire clay. Place gear in the case with new bone, covering it ¼-inch. Sprinkle the top with old bone. Heat for 16 hours and allow it to cool in the furnace over night. Reheat to blood red in the morning and dip in a brine of 1 pound of salt to a gallon of water. No. 6 pitch teeth are stronger than No. 8 pitch. The gear requires less face and is better able to stand the shock of a clash gear system.

## VALVE ADJUSTMENT

Medford, Mass.—Editor MOTOR AGE—What are correct points of the piston stroke for the opening and closing, respectively, of the inlet and exhaust valves? Is a good muffler easily made? What is the smallest practicable muffler that can be used with a 4½ by 6-inch single-cylinder motor?—A. E. C.

Generally speaking, open the exhaust when the crank pin makes an angle of 18 degrees with the cylinder center line, before completing the expansion stroke. Close upon reaching the dead center. Open the inlet at this point and close it as the piston starts on the compression stroke. Use a muffler with a capacity of six and one-half times the cylinder volume, with five outlets of ¾-inch pipe.

## MOTORS COMPARED

Kewanee, Wis.—Editor MOTOR AGE—We have two four-cycle stationary gasoline engines, one of which is 5½-inch bore and 11-inch stroke, and the other of which is of 6½-inch bore and 9-inch stroke. Which will develop the more power at 280 revolutions per minute? At what speed should each run to give the most efficient service? Both engines are well made and in good working order. Each run at the most suitable speed, should develop what horsepower?—LUSHMAKER BROS.

The 6½ by 9-inch motor will develop one-eighth more power at 280 revolutions. The

speed of 280 revolutions is the proper speed for this motor. The 5½ by 11-inch motor should run to the best advantage at 240 revolutions. Under these conditions, with average compression, the former should develop 8 horsepower and the latter 6¼ horsepower.

## USE OF PICRIC ACID

Meriden, Conn.—Editor MOTOR AGE—What is the correct amount of picric acid to use per gallon of gasoline to obtain the greatest efficiency? Is picric acid injurious to the motor, and will it injure a galvanized iron gasoline tank?

Use a saturated solution of the acid powder, as picric acid is but slightly soluble in gasoline. To the knowledge of MOTOR AGE there are no injurious effects outside of a very slight corrosion in the tank and carburetor. No action was noticed in the cylinder after using picric acid for several months. The action on galvanized iron is not considerable.

## CHARGING DRY BATTERIES

Belleville, Ill.—Editor MOTOR AGE—Will you kindly tell me how to recharge dry batteries, if this is possible?—JACOB WALKER.

Recharging dry batteries is possible to a limited extent only, and is performed similarly to recharging an accumulator. Put the batteries in series with two 16 candlepower direct current incandescent lamps, with the positive wire connected to the carbon element of the battery, and charge through this system.

## FLOOR FOR CAR STABLE

Meriden, Conn.—Is it practicable to cover a wooden floor with asphalt or other fireproof coating for the support of an automobile? I understand that a ground floor is better, but I have a wooden floor already, and wish to cover it to convert the room into an automobile house.—G. A. FAY.

An asphalt covering would be attacked by oil and gasoline. A sheet zinc covering is sometimes used with the joints soldered and a flange projecting upward around the edges to retard the oil and water that may accumulate. Advertisers listing mineral wool can probably supply a covering of this kind that will be suitable.

## INCREASING POWER

Owosso, Mich.—Editor MOTOR AGE—I have a runabout with a 4½ by 6-inch motor with a float-feed carburetor. Is there any way to make the engine develop more power than it does now? Would it be of advantage to put a plate on the end of the piston to increase the compression, and would the machine stand this extra compression? Would the addition of such a plate be apt to cause premature ignition? How can the speed of the motor be increased? How should the carburetor be set to give the best service? What should be the maximum lift of the exhaust and inlet valves, and at what points of the piston stroke should these valves be respectively open and fully seated? What is the best method of repairing a single-tube tire which is punctured by a large nail? Is the use of picric acid in gasoline advisable, and what is the method of using this acid?

When I am out with the car in a rain storm I continually receive shocks from the spark advance lever and through the steering lever. How can this be remedied?—CECIL O. POST.

Try a plate to increase the compression, but place it on the cylinder, if possible, so as not to throw the reciprocating parts out of balance. If the compression is already as high as the motor will stand, it will cause premature ignition. Experiment only will show the proper carburetor adjustment for the particular machine. Open the exhaust valve 5-16 inch from the end of the stroke and close on the dead center. Open inlet valve as the exhaust is closed and keep it open until the piston starts back on the compression stroke. The lift of a valve should be one-fourth of the small diameter of the seat. The single-tube tire should be plugged and vulcanized. Picric acid is slightly soluble in gasoline. Make a saturated solution of the acid salt and filter before pouring into the tank. The electric shock is caused by self-ignition in the primary circuit. Use no grounded wire in the primary circuit, and insulate the circuit breaker.

## PRESSURE LUBRICATOR

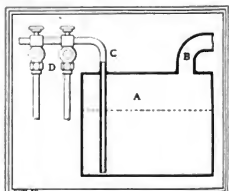
Kenosha, Wis.—Editor MOTOR AGE—Will a lubricator made on the principle shown in the accompanying drawing operate well on a four-cylinder motor? The reservoir is indicated at A, while B is a ¾-inch iron pipe from the exhaust pipe, to supply a suitable pressure; C the delivery pipe, of ¼-inch brass and extending to within 1-16 inch of the bottom of the reservoir; and D slight feeds of usual construction. Should the pipe B, from the exhaust, be fitted with wire gauge to protect the oil from fire? Would an air pressure be better than the exhaust pressure?—J. B. WISE.

Pressure from any source can be used to advantage. It is advisable to place a pressure regulating valve between the source of pressure and the oil tank. In the oil pipe the line between the tank and the feeders put a check valve to prevent flow by gravity or siphoning, and also to check back pressure. Wire gauge would be advisable, although not necessary, if the pipe to the oil tank is 4 feet or more in length. It is preferable to use ¼-inch actual diameter copper pipe between the tank and the feeders to prevent clogging and to facilitate the flow in cold weather.

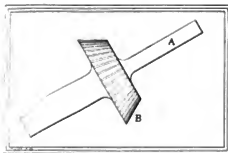
## BORING VALVE CASTINGS

Wing, Ill.—Editor MOTOR AGE—I have had some trouble in boring out valve castings to form the valve seat. What is the best kind of tool to use for such work? The valve chamber castings are cast independently of the cylinder and are comparatively small, being for a 4-horsepower motor.—W. B.

Face off the cylinder and the cylinder head. Drill both for the bolts and also two dowel



LUBRICATOR SUGGESTED BY J. B. WISE



PLUG SUGGESTED BY J. C. HUDSON

pina. Rough bore the valve seat and insert a steel plug with a hole the size of the valve stem. With this as a pilot drill a guide for the valve. Remove the plug and with the tool shown in illustration bore the valve seat. The cutter B, is guided by the forward pilot A, which is rotated in the hole drilled for the valve stem.

### MOTOR SPECIFICATIONS

Hartford City, Ind.—Editor *MOTOR AGE*—I have a double-ported cylinder motor of  $5\frac{1}{4}$ -inch bore by 5-inch stroke, the compression of which is from 45 to 50 pounds. The fly wheel is 22 inches in diameter, and weighs 120 pounds. What should be the size of the exhaust valve opening, and what should be the lift of the valve? Is the fly wheel large and heavy enough? Is the compression sufficiently high? What size should be the exhaust pipe running to the muffler? What horsepower should the engine develop with the compression and fly wheel mentioned? At what point of the piston stroke should the exhaust valve begin to open, and how far should the piston travel before the valve is fully open?—A. C. CRIMMEL.

The exhaust valve should be 1 $\frac{1}{2}$  inches in diameter, and should lift 7-16-inch. The fly wheel could stand another 25 pounds to advantage and the compression should be increased to 80 or 85 pounds. Use a  $\frac{1}{4}$ -inch wrought iron pipe which has an inside diameter of  $\frac{1}{8}$  inches for the exhaust. A piece of 2-inch pipe is preferable, but will weigh considerably more. The motor should develop 12 horsepower at 950 revolutions per minute with the increased compression, and 7.2 horsepower as it is now. Open the exhaust 11-32 of an inch before completing the firing stroke and close on the dead center. Open the inlet at this point and allow it to close after the piston starts to return on the compression stroke.

### WIRING MULTIPLE MOTOR

Anacortes, Wash.—Editor *MOTOR AGE*—Will you explain the system of wiring a two or more cylinder motor so that but one induction coil is used?—E. L. K.

A two-cylinder opposed motor with the cranks at 180 degrees, or a two-cylinder vertical motor with cranks parallel and on the same side of the shaft is wired as shown in the illustration. Either use a cam with two elevations and one brush as shown, or one with one elevation and use two brushes. In the latter case the two brushes are connected by a wire. The brushes are insulated. Either arrangement will operate the coil twice to each revolution of the cam, or once in each revolution of the motor. The two secondary wires are connected one to each spark plug. This sparks each cylinder every revolution and is effective in only one as the other is exhausting a burned charge. The single coil for use on a three or more cylinder motor consists primarily of interrupting the primary circuit as many

times as there are cylinders, each revolution of the cam shaft. A distributing arm communicates the secondary to the proper cylinder. This method will be illustrated in *MOTOR AGE* in a future issue.

### NON-FOULING PLUG

St. Louis, Mo.—Editor *MOTOR AGE*—One of the greatest defects of the spark plug is its tendency to "go out of business" upon the application thereto of a slight quantity of lubricating oil during operation of the motor; and in practice it has been found almost impossible to prevent more or less lubricating oil from being forced past the piston-rings, and this oil almost invariably causes a coating of carbon upon the points of the spark plug and thereby fouls it.

So common has the fouling of plugs become that many operators cannot run their cars 5 miles without fouling one or more plugs, and in many instances the fouling is caused by an excess of lubricating oil in the crank-chamber, although, of course, in numerous cases fouling has also been caused by too rich a mixture.

The writer has discovered that if the points of the spark plug are located quite a distance from the adjacent wall of the cylinder or valve-chamber to which the plug is applied that the excess of oil will not reach the points and the plug will therefore remain clear until fouled by rich mixture.

In the illustration the spark plug is provided with the usual threads by means of which it is screwed into the cylinder or valve-chamber, but has an extra long shank at its inner end, which projects a considerable distance beyond the wall, so that during use the excess oil will follow the wall in its passage to the exhaust-opening and will not reach the points of the plug.—JOHN C. HUDSON.

### MUFFLER DISPOSITION

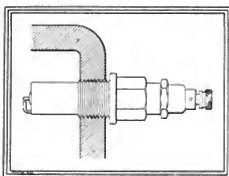
Altoona, Pa.—Editor *MOTOR AGE*—In case a suitable position is found for the muffler, say 18 to 24 inches from the motor, will it serve as efficiently and noiselessly as though it were placed but 4 inches from the motor?—J. U. B.

Placing the muffler at the greater distance from the motor will increase the efficiency and decrease the noise. This construction allows a greater muffler capacity and greater radiating surface, both of which are desirable.

### BATTERY TESTING

Palo Alto, Cal.—Editor *MOTOR AGE*—What is necessary to comprise a full set of testing instruments for batteries and coils? How are these instruments used to give good results?—F. H. SMITH.

If it is desired to test the coil and batteries in a car, a volt meter and an ammeter are all that are necessary. If making a comparative test of various makes of batteries and coils other apparatus is necessary. A new dry battery should register at least 1 $\frac{1}{2}$  volts. When the voltage drops to .68 volt the cell is of little use. The amperes will vary with the size of the cell, and as the ordinary coil re-



CUTTER FOR VALVE SEATS

quires but  $\frac{1}{2}$  ampere the ammeter is of little service. To test the coil connect the ammeter in series with the battery and coil. The reading should not be over  $\frac{3}{4}$  ampere if the coil is properly made. This, with the voltage for which the coil is wound, should deliver a thick, reddish-purple spark. The thin, white sparks have but little heat value. The variation of the spring and contact adjustment will often produce a fat spark, from what seemed a poor coil. In adjusting the vibrator do not screw in as far as it will possibly go and still vibrate, but leave it at the point where there is a slightly rattling vibration and a minimum primary spark.

### USE OF MAGNETOS

Chicago—Editor *MOTOR AGE*—I own a gasoline runabout and use the ordinary dry batteries, which do not prove satisfactory; and wish to inquire if small dynamos are used to any extent? It would seem that a good dynamo should give a more uniform current than a set of dry batteries. Is there any objection to the use of a small dynamo for ignition purposes? New dry batteries give a very good spark, but soon run down, and on a long run are apt to give out just when they are needed the worst.—C. P. J.

Small dynamos and magneto-generators are in common use for ignition purposes, and are said to give very satisfactory results. It is necessary in some types to use some form of battery to start the motor with, after which the dynamo or magneto is switched on and the battery cut out.

### STEAM ENGINE HORSEPOWER

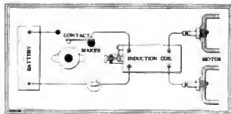
Syracuse, N. Y.—Editor *MOTOR AGE*—Will you inform me through the Readers' Clearing House what horsepower a double-cylinder steam engine of 2-inch bore and 3-inch stroke will develop?—A. D.

With a mean effective pressure of 120 pounds per square inch and cutting off at one-third stroke, such an engine should develop about  $\frac{6}{10}$  horsepower at 600 revolutions per minute.

### HEATING OF MOTORS

Dayton, O.—Editor *MOTOR AGE*—Does a two-cycle motor running at the same speed use twice as much battery current as a four-cycle motor? Does not a two-cycle motor give off more heat than a four-cycle motor of the same size?—F. E. T.

A two-cycle motor will use twice as much battery current as a four-cycle motor, as twice as many sparks have to be produced during the same number of revolutions. The amount of heat developed by a two-cycle motor is not much greater than that given off by a four-cycle motor, as the charges are not so rich or under so high a degree of compression as those in a four-cycle motor. The impression to the contrary is general, however.



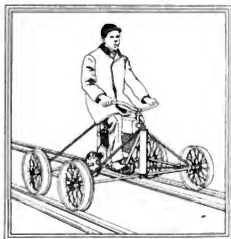
WIRING TWO-CYLINDER MOTOR



# AUTOMOBILE

The railway motor cycle shown in the illustration is an adaptation of a regular pedal driven railway quadricycle. It was motor equipped by the Merkel Mfg. Co., of Milwaukee, Wis., which attached an ordinary Merkel  $2\frac{1}{4}$ -horsepower bicycle motor to it. This was placed vertically on the rear frame so that a direct spur gear drive to the live rear axle might be had. The machine is started like a motor bicycle, there being a free-wheel pedal and chain drive. A hand brake is a part of the large spur gear on the rear axle.

It is said that the machine has a speed range of from 4 to 25 miles an hour. The Merkel company believes this to be a desirable form of light motor railway inspection car.



MERKEL RAILWAY MOTOR CYCLE

## THOR COMPENSATING SPROCKET

Ever since the introduction of the motor bicycle there have been numerous attempts to rid the chain drive system of its "jerkiness" by the use of some sort of spring or other yielding sprocket. The Aurora Automatic Machinery Co., of Aurora, Ill., has recently produced a compensating sprocket to form a part of the well known Thor motor bicycle factors. It is of few parts and is said to be a practical medium for absorbing the motor shock, especially when running at low speed, when such shock is naturally more felt by the rider.

The Thor sprocket consists principally of three parts; two side plates and the sprocket rim. Between each plate and the sprocket rim are two square bronze rings rolled diagonally and fitted in grooves similarly shaped in the sprocket rim and side plates. The side plates are clamped together with bolts and nuts on the inside of the sprocket rim, and adjusted to suit the rider's requirements. If the rider desires a rigid drive, it requires but a moment to tighten up the nuts and secure the desired results.

On account of its peculiar construction, the clamp has a contact surface of nearly 10 square inches on the bronze rings, and consequently the same amount on the sprocket and sides. Owing to the diagonal position of the contact members, the gripping strain is increased in proportion to the pulling of the chain; hence, it is not necessary to clamp the sprocket tightly. The diagonal construction centers the sprocket, and compensates for wear that may occur.

It is claimed that owing to the large contact surface and the slight pressure necessary, the sprocket, while absorbing the jerk of the motor, does not lose its adjustment; that it will prevent the breaking and undue straining of the chains, and allow the machine to be stopped quickly, on account of allowing the motor to slow down, and to stop gradually independently of the machine. This sprocket takes the place of the ordinary counter shaft sprocket of the regular Thor motor bicycle set, and without any changes in the other parts.

## ELECTRIC PASSENGER BREAKS

The Auto-Car Equipment Co., of Buffalo, N. Y., is executing an order for twenty-passenger electric breaks which are to handle intra-mural traffic at the world's fair at St. Louis, Mo.

These vehicles have a wheel base of 8 feet 10 inches, standard gauge track, and 36-inch artillery wood wheels, fitted with 4-inch solid rubber tires. The body platform is 12 feet long

# DEVELOPMENT

The Auto-Car Equipment Co., which incorporated the first of the present year, has found it necessary to expand and has secured about 10,000 square feet additional factory space, and now announce that it will turn out automobile bodies in tonneaus, runabouts and combination surreys, which will be furnished either in the white or painted and trimmed. The company also manufactures canopy tops, sliding gear transmissions, equalizing gears, running gears and other parts and supplies. E. B. Olmsted already known to the automobile trade, is the sales manager of this company, as well as secretary. He will push the parts end of the business vigorously as well as the regular line of omnibuses, breaks and commercial vehicles.

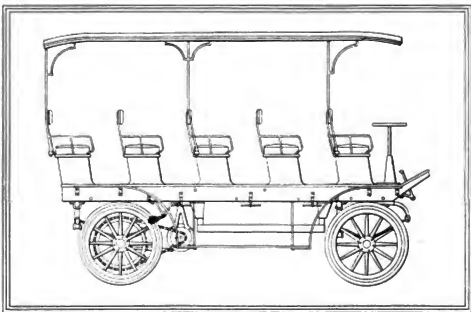
## BODY OF MAHOGANY

The latest automobile oddity in Louisville, Ky., is a touring car with mahogany body for C. C. Mengel, who imports African woods. About the time he placed his order for a Rambler last fall he received a lot of particularly fine mahogany from the Congo state, and forwarded sufficient for two bodies to the Jeffery company. The latter reports that on account of the hardness of the wood over 3 months were taken to work it into shape. The second body is being put on the car which will be sent to the St. Louis exposition.

## ENGLISH SHOW REVIEWED

Excellent and interesting as the recent exhibition in the Agricultural hall, London, was, it was disappointing in the actual number of cars, complete and in chassis form, says a writer in the *Autocar*, of London.

Last year's figures at the hall—443—came very near those of the palace—534—which shortly preceded it, while the hall exhibitors, both general 235 and car 122, actually exceeded the palace—189 and 115 respectively. The palace figures rose this year to 255 general and 122 car. The hall figures in the "fall on" section reached the record of 284, while the car exhibitors were practically the same—116. If those who showed motor boats, six, and motor mowers, two, be added, they become 124, or, with those who only showed motor



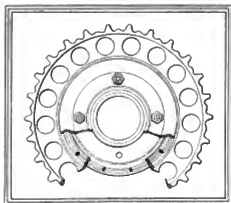
TWENTY-PASSENGER BREAK FOR THE WORLD'S FAIR

cycles, eleven, 135, against 136 at the palace. Indeed, it is really a dead heat, as in one case two firms of manufacturers at the hall were represented by a single agent, so there was once more the singular fact of two shows having, in the motor section, the same number of exhibitors—136.

It was otherwise with automobiles, which fell away from complete cars, 362 to 285, and from a total of 443 to 382—a decline in numbers of, say, twenty-two per cent and fourteen per cent. The reason is not easy to see, save that the exhibitors were generally content with a smaller display.

A singular and regrettable feature at both shows was the absence of cars which derive their power of propulsion from alcohol. This is all the more extraordinary considering the efforts that are being made to promote the production of suitable alcohol in the kingdom, more especially in Ireland.

It will be seen that gasoline almost sweeps the board—90.995 per cent at the palace and 90.311 at the hall—but even these inclusive figures do not represent the entire case, as nearly all under the hood of steam apply to lorries and the like. As a matter of fact, there were only five or six actual passenger cars in the hall—only just over 1 per cent. Electricity, too, seems on the decline—say, 3 per cent at both shows, or less than half the proportion it showed the previous year.



THE THOR YIELDING SPROCKET

Only two forms of gear demand serious consideration—the chain drive and the propeller or cardan shaft, direct central transmission. The rise into favor of the latter is shown by the statistics. There is a marked difference between last and this year. At the palace 1903 show, chains claimed 55 per cent, shaft nearly 37 per cent, while at the hall 49 per cent and under 43 per cent represented the state of affairs. At this year's palace show the chain was in a very decided majority—56 per cent, shaft only 40 per cent. This year's hall show brought about a complete change, and for the first time—a notable date for his-

torians of the future—the shaft, 181 in numbers and 47.382 per cent in proportion, beat the chain, 175 in numbers and 45.812 per cent in proportion, the two forming 93.194 per cent of all.

Low price was a feature of the show, but the exhibitors of cheap cars seemed chary of saying anything about them. To give but meager details, with the entire absence of prices, in the official catalogue was a very short-sighted policy on the part of the exhibitors.

In connection with steam cars, several used petroleum as fuel. Out of the twenty-two steam motors in the show, fourteen or fifteen were heavy vans or lorries burning coke, etc.; nearly all the remainder of the passenger cars used petroleum.

Included in the chain cars were many, mostly of the lighter description, with a central chain drive.

Aside from such consideration as improvement in design and especially in body structure probably the most notable change in tendency as marked by the show this year was the great increase in propeller shaft transmission above mentioned. It would seem, at least casually, that the live axle properly made, has proven itself reliable in all kinds of usage and that the motor construction were hence also a safe and efficient one. At any rate it is a popular one.

## DISTINCTIONS IN RADIATOR CONSTRUCTION

VISITORS to the Paris show last December reported that foreign makers were discarding the cellular cooler in favor of a new form of tube and disk radiator. This report was received with some apprehension among American manufacturers, many of whom had so prepared for the use of this style of cooler as to make a radical change impossible. Sentiment in America had been influenced by the attitude of foreign automobile builders, and it began to look as though the popularity of the honeycomb radiator might suffer. In fact, some of the leading manufacturers in the United States began at once to experiment with disk radiators.

A few American builders, however, who had used the Whitlock cooler during the latter part of 1903, having found that it gave satisfactory results, made no effort to change. Others soon began to appreciate that the foreign attitude on the question had been exaggerated. Whatever the Paris show may have indicated regarding the attitude of foreign builders, the New York show revealed the fact that nearly all of the leading American builders of touring cars, had adopted the Whitlock style of cooler for 1904.

It has also developed that the action abroad was due to certain well defined causes which do not exist here. In the first place, foreign cellular coolers are very expensive, necessarily so, because the small square or hexagonal tubes of which they are composed are much more expensive than the sheet copper used in the American style. Another element in the situation is the fact that the "nested tube" cellular cooler requires great skill in its manufacture, and even when most skillfully made, almost invariably gives trouble by leaking. The efficiency of this style of cooler, however, stands unimpaired, as does its beauty of design and general appearance.

The multiple cylinder car, with front verti-

cal motor, has lost no popularity either abroad or at home, and wherever foreign makers have discarded the cellular cooler, they have filled its place in the front of the hood with a disk radiator made to look as much like a cellular cooler as possible.

As compared with the Mercedes type, the Whitlock is not, properly speaking, a cellular cooler at all. It is not open to the objection, often raised against the Mercedes, as the typical cellular cooler, that it proverbially leaks. On the contrary it gives remarkably little trouble on this account; no more than is experienced with the ordinary disk radiator. It is not composed of an aggregation of loose tubes merely held together at the edges by solder, as in the original cellular cooler, in which the constant twisting and vibration strains the tubes apart, causing leakage, even where the cooler is perfectly tight at the start. It consists of a series of corrugated sheets, extending in continuous lengths from the top to the bottom of the cooler. The effect of this continuity is strength, not rigidity; for the corrugations make the cooler flexible, so that the twisting, straining and vibration of the severest usage are not apt to loosen the joints or cause leaks.

Furthermore, the flexibility of the corrugations is a safeguard in cold weather. The Whitlock cooler is less likely to be frozen up than many tube and disk radiators, on account of its compact structure and the absence of a natural circulation of air, but it is also better fitted to withstand uninjured any accident of this kind. The past winter has developed scarcely a single case of serious injury to a Whitlock cooler by freezing; in fact, one case has come to our notice where a 25-horsepower cooler

has been in constant use all winter, having been frozen solid at three different times without injury or repair. This particular cooler, although in constant use since last June, has never given a moment's trouble on any account.

The saving in weight effected by its use is a strong point in favor of this type of cooler. Two actual cases will suffice to illustrate.

In the first, the original cooling system comprised a radiator and a 6-gallon tank of water, together aggregating over 85 pounds. This was replaced by a Whitlock cooler weighing 28 pounds and carrying a little over 2 gallons of water, so that the total weight is now under 50 pounds—a saving of about 42 per cent.

In the second case, the original system, including a disk radiator of special design and a 15-gallon tank of water, weighed over 250 pounds. In place of this was substituted a Whitlock cooler, weighing 70 pounds, and carrying 4 gallons of water, giving a total weight of a little more than 100 pounds—a saving of 60 per cent of the weight of the original cooling system.

The fact that there is little or no evaporation in this type of cooler absolutely precludes the deposit of lime—a bugbear without foundation in the minds of some. It also prevents the necessity and annoyance of frequent filling. To be able to run 1,000 miles without a thought of the cooling system is certainly no small advantage.

It also offers no resistance to the flow of water, thus relieving the pump from pressure and taking this load off of the engine; while at the same time allowing rapid circulation of water, which is fundamental to efficient cooling. In addition to this the water piping is simplified and the system as a whole takes up less room, on account of the omission of an extra tank and the necessary piping which goes with it.

EDITOR'S NOTE—This article is by Joseph E. Lewis, of the Whitlock Cell Pipe Co. Its purpose is to explain from the maker's standpoint the difference between the Whitlock and that style of radiator commonly known as "cellular."

# FROM THE



# FOUR WINDS

Henry Chapman has opened an automobile repair shop in Marengo, Ill.

Some capitalists intend organizing an automobile line in Anshun, Cal. Buses seating sixteen passengers are intended for the service.

The highway board of the Island of Manx, England, has decided that a fine of \$100 will be inflicted for every person or animal found upon the course during the English eliminating race.

Dr. E. D. Stillman, of West Acton, Mass., is establishing an automobile service between Worcester and Paxton, Mass. Headquarters will be located in Haverhill. Steam cars seating twelve passengers will be used in the service.

At the recent election of officers for the Richmond Automobile Club, Richmond, Ind., Professor R. L. Sackett, of Earlham College, was named president; O. E. Fulghum vice-president; A. J. Spokeahier, secretary. The club has decided to join the American Motor Association.

The following officers were named at the annual election of the Bloomington Automobile Club, Bloomington, Ill.: S. P. Irvin, president; J. A. Beck, vice president; Henry Thoburn, secretary; Charles Dietz, treasurer; W. K. Bracken, William Courcy, C. W. Stevens, Walter Johnson, E. N. Martens, directors; Jeff Crawford, road captain.

Banker Bros., of Pittsburg, Pa., are contemplating the addition of a new department to their extensive business in the east end, to build the bodies of automobiles themselves. They propose to buy the chassis from factories and build the bodies to the order of their customers. The step has been practically decided upon and was caused by the delays that the firm has suffered this year because it could not get bodies in time.

The grand stand for the German Automobile Club at the starting point in Saarburg will have accommodations for 3,000 persons. The entire stand will be divided into boxes, each seating six persons. The charge per seat will be \$12.50. Smaller stands will be erected between Saarburg and Homburg where seats will cost from \$1.50 upwards. When all the stands are finished it is figured that they will be able to hold over 20,000 spectators.

A trip that will test a two-cycle motor severely is now being planned by Percy F. Megargel and William S. Harrison, the two Rochester, N. Y., newspaper men who recently held an automobile show in that city, accompanied by Ralph G. Megargel, of the Scranton Automobile Club. An Elmore 1904 tonneau car will be used and the start will be made from New York city on or about May 10. The Megargel brothers have long used a two-cycle motor on their launch and advocate

its use in automobile construction, claiming that it possesses twice the hill climbing properties of a four-cycle engine. The Elmore car attracted their attention at the Rochester show and they have closed negotiations for such a car through Arthur McNall, the Rochester agent, arranging to have the car shipped directly to New York, where the 3,000 mile trip will be commenced.

In a recent case before a Belgian court, the judge stated that he did not see how he could sentence a man accused of having caused an automobile accident when he did not drive his car but loaned it to a friend. The judge said it was a poor law and still poorer justice to hold the owner of a motor car responsible for an accident in which he had no part.

An important decision has been rendered by the commissioner of patents to the effect that a design cannot be made the subject of a second patent merely because it has been put to a new use, since the question of use does not enter into consideration in designs. They relate solely to the matter of appearance.

According to official announcement Baron Pierre de Crawhez, the Belgian gentleman driver, will run a Hotchkiss car in the French eliminating race and a Pipe car in the Belgian trial event. A Paris paper wants to know what will happen should he qualify both in France and in Belgium.

A fire in the store of the Powell Automobile Co., of Omaha, Neb., last Sunday resulted in the complete destruction of four motor cars valued at about \$5,000. Prompt action on the part of the firemen prevented the spreading of the blaze and about a dozen cars were saved.

A French paper recently published a letter from a physician who claimed that it was Rigby's high quality of brain more than the quality of the car which enabled him to run the car at a speed of 95 miles an hour.

According to an official trade paper there are only 1,670 motor cars in use in Italy. Of this number 350 are to be found in the province of Turin; 239 in the province of Milan and 169 in the province of Florence.

A rural mail carrier recently was treated with a ride by a motorist of Germantown, O. The mail road, which is about 25 miles long, was covered in 2 hours, during which time 192 stops were made.

The first club run of this season by the Automobile Club of Pittsburg, Pittsburg, Pa., has been set for May 7. The run will be through the parks and over the principal boulevards.

The city administration of Scranton, Pa., is in need of money and an anti-automobilist suggested at once a tax on automobiles.

Local motorists in Denver, Col., are planning an amateur automobile race meeting to be held Devotion day at Overland park.

Automobiles may not be driven faster than 5 miles an hour in Norristown, Pa.

The mayor and the chief of police of Pasadena, Cal., are much in favor of getting an electric patrol wagon for the police department.

An automobile factory may be erected in Port Huron, Mich., this summer if eastern capitalists who have been visiting the town agree with the city authorities upon certain conditions.

The St. Paul Motor Club, St. Paul, Minn., is arranging an endurance run over a distance of about 140 miles. The test will be held sometime in June. A hill-climbing contest is also being arranged, to be held possibly before Devotion day.

At the end of last January the Scottish Automobile Club had 323 members. At the meeting of the Automobile Club of Antwerp, Belgium, held during the latter part of last month, it was announced that the members of the club numbered 115, an increase of nearly 50 per cent within one year.

The Utah Automobile Co., Salt Lake City, Utah, held its opening last Thursday, Friday and Saturday. Sixteen different styles of automobiles were displayed. The company handles the Olds, Peerless, Winton, Cadillac, Orient, Packard and Cleveland. The visitors, who were numerous, were entertained by music both afternoon and evenings.

The new store and garage of the Pence Automobile Co., of Minneapolis, Minn., is ready for occupancy and will be opened Saturday of this week. This is a four-story and basement building, 30 by 150 feet and is one of the finest establishments in the west. Aside from handling seven different makes of cars the Pence company is northwestern distributing agents for a line of appliances and sundries.

The Michigan Motor Co., of Grand Rapids, Mich., has been organized. No articles of incorporation have been filed and the concern will probably not incorporate. Automobile engines and motors for launches will be manufactured by the new company, which is located at 246 South Front street. Harry, Frederick and Charles Perkins are the members of the concern, and the last named will be the manager.

The Ladies' Automobile Club of Great Britain and Ireland now has a membership of 267. At a recent meeting of the officers it was decided to have a uniform subscription and entrance fee for town and country members. The subscription fee will be \$25 and the entrance fee \$15. The club's committee has arranged an excursion to Homburg at the time of the international race and about a dozen members have already decided to go on the run.

At a recent meeting of the board of safety of Dayton, O., a resolution was adopted urging the council to pass an ordinance making the carrying of a number on the rear of automobiles compulsory.

☞ ☞

The record-breaking Gubron-Brillie car which was so prominent at the Nice meeting will not be used in the French eliminating race. Several 100-horsepower cars are now being finished and it is claimed by some who saw their motors that they will even be able to run faster than Rigolly's Nice monster.

☞ ☞

Between Lecco and Inrobello, Italy, an automobile bus service has been organized. The distance is 64 miles and traverses roads with 7 to 12 per cent grades. The average speed of the buses is 8 miles per hour. There are two in use, being made by the Union Co., of Nuremberg, Germany. One is provided with a 12-horsepower single cylinder motor.

☞ ☞

Dr. C. T. Clifford, of Lowell, Mass., says that he intends to accompany C. J. Glidden on the first 3,000 miles of the latter's trans-continental tour this summer. He will use his single-cylinder Knox, which has already been in use 2 years and, while he does not expect to match searing "stunts" by Mr. Glidden, he anticipates plugging along to be on hand at the finish each day. The tourists will start from Liverpool about the middle of May.

☞ ☞

If the plans of the chief of the fire department of Evanston, Ill., are approved by the special fire committee of the Chicago suburb, it may only be a question of a few weeks before the fire department will have an automobile hose wagon and chemical engine combined. Such a vehicle will cost \$4,000 and if it should give the expected results the horsedrawn fire engines now being used will be replaced with automobile fire fighting engines. Chief Meresh of the fire department said it would be a great improvement and result in much economy.

☞ ☞

The anti-skid or non-slip tests arranged by the Automobile Club of Great Britain and Ireland started Monday, April 18, when eleven different devices were tested over a road about 145 miles long. The weather was fine; in fact, it was the reverse of what was desired for this kind of a test. The competition was for a week, and every day the run was made over a different road and over varying distances. The Automobile Club of Great Britain and Ireland named a committee of experts to follow these tests and they will draw up a detailed report at the conclusion of the event. It is the first English experiment on a large scale with non-skidding devices and results are awaited with interest by the makers and owners of automobiles at home and abroad. The total distance for all the tests is nearly 850 miles.

At the spring election held in Outagamie county, Wis., last week, the voters, principally farmers, adopted a referendum regulating the running of automobiles on the public highways. All automobiles must come to a full stop when signaled to do so by the driver of any conveyance which may be met, and shall remain at rest until such conveyance shall have passed. The driver of any automobile wishing to pass a conveyance on the road shall properly signal the driver of such conveyance he may desire to pass. No automobile shall be driven faster than 12 miles an hour, and when crossing a highway and passing over the crest of a hill the cars must not be driven faster than 4 miles an hour.

☞ ☞

The Automobile Club of Pittsburgh, Pa., will hold its first event Sunday, May 8. A procession of the 200 club members will assemble at the Hotel Schenley in the morning and take a half day spin around the city boulevards. The bad weather of the past 6 weeks has prevented any general event and kept many from going out at all. If the weather is favorable Sunday most of the club members and many private motorists will be out to begin the season's sports. As soon as possible the club will arrange for a series of races which will be held probably on Brant's island, where the races of last year were so uniformly successful.

☞ ☞

John Hanson's automobile repair shop in the Park building, Evanston, Ill., has been purchased by T. S. Ellithorp and M. W. Bart. New quarters were taken up at 1834 Maple street and the name of Evanston Auto Co. given to the concern.

☞ ☞

An automobile race is being planned for Decoration day from Salt Lake City to Farmington, Utah, a distance of about 20 miles. The Salt Lake clubmen are promoting it.

☞ ☞

The postmaster of St. Louis, Mo., intends to have the postoffice department use an automobile for the collection of mail and packages on the fair grounds.

☞ ☞

By a recent typographical error E. F. Phelps, manager of the New York office of the Phelps Motor Vehicle Co., was made to assume the initials E. J.

☞ ☞

Gregory & Co., who have been engaged in the bicycle and automobile business in Fresno, Cal., for several years, have sold out to Waterman Bros.

☞ ☞

The Gubron-Brillie car with which Rigolly cleaned up the entire program at the recent races at Nice, France, was fitted with Michelin tires.

☞ ☞

An automobile salesroom has been opened recently by Hubbard Nussel in the Cummings building, Central street, Chippewa Falls, Wis.

At the annual meeting of the Fremont Automobile Club, Fremont, Neb., the following officers were elected: D. V. Stephens, president; Rudolph Schurman, secretary-treasurer; Ross L. Hammond, F. E. James and Rex Henry members of the board of control.

☞ ☞

At a meeting of the board of governors of the Automobile Club of Buffalo, N. Y., Edward H. Butler was appointed delegate of the club at the James Gordon Bennett race. Mr. Butler will also be asked to see the officials of the Automobile Club of France and of the Touring Club of France concerning the question of interchanging favors.

☞ ☞

J. F. Davis, trustee in bankruptcy of the Holley Motor Co., of Bradford, Pa., will sell at public auction at Bradford, May 10, all of the book accounts, manufacturing material and partially finished products of the company. A meeting of the creditors of the Holley company will be held May 16 to consider a proposed sale of the real estate and machinery. This is encumbered by a mortgage and the trustee wishes authority to sell and consequently free the estate of the incumbrance.

☞ ☞

The Binghamton Automobile Club, of Binghamton, N. Y., was organized April 29, and the following officers were elected to serve until the first annual meeting is called: Willis Sharpe Kilmer, president; John M. Davidge, vice-president; Dean Albert Smith, secretary and treasurer. The club was organized under the rules of the state association and will affiliate with that association and the national organization after the merger of the A. M. L. and the A. A. A. has been effected. Ninety charter members formed the club and it is expected that within a short time fifty new members will have been added. One of the first steps of the new club will be to send a delegation to the officials in New York having charge of the St. Louis caravan to try to induce them to have the latter pass through Binghamton.

☞ ☞

Regulations concerning the running of automobiles in Omaha, Neb., were discussed and adopted last week at a meeting between the members of the city council, three automobile dealers and three motorists. It was agreed upon that the speed in the city should be 5 miles and in the suburbs a maximum of 12 miles is permitted. Motor vehicles must be licensed and numbered. The figures must be 5 inches high and every car must be provided with one or more white lights in front and one or more red lights in the rear. Every machine must also be provided with a bell, gong or horn, which must be sounded when crossing a road. A powerful brake is required and cars must be able to stop within 10 feet when going at 8 miles per hour. The former ordinance limited the speed to 6 miles per hour and also made it necessary to deposit a bond of \$100 with the city authorities.



# CURRENT MISCELLANY

## MOTOR CARS AS FREIGHT

The National Association of Automobile Manufacturers is preparing to approach the official classification committee in an endeavor to secure a modification of the present freight rates on automobiles. To show the importance of this contemplated campaign for more equitable rates the association has prepared the interesting following data:

The number of automobiles to be made in 1904 will be about 25,000. A very conservative estimate is 20,000. These, if shipped in carloads, would fill 5,500 cars. If handled one way only they would be charged at the present minimum rate—10,000 pounds per carload—as 55,000,000 pounds.

Not more than one-half will be shipped in carload lots. One-half or 10,000 automobiles would fill 2,750 cars. The remainder would be shipped, say, averaging two to a car, or in 5,000 cars. This makes a total of one-way shipments of 7,750 carloads.

About 50 per cent will, at some part of the season, be shipped from point to point by tourists, in every case being charged at the minimum of 6,000 pounds; or in all 60,000,000 pounds—the equivalent of 6,000 carloads.

The automobiles in use, beside the 1904 product, number at least 30,000. They have paid freight proportionate to the above, and this year will be shipped by their owners, from place to place, to the extent of at least an additional 60,000,000 pounds.

It appears, therefore, that the railroads will handle this year the equivalent of 197,500,000 pounds; or, 98,750 tons which equals, at the present minimum rate of 10,000 pounds, 19,750 carloads. This is equal to 551 freight trains of ordinary length or to one train 149 miles 1,093 yards long.

## MOTORS IN TELEGRAPH SERVICE.

Experiments with motor cycles were made April 17 near Vienna under the direction of the Austrian Automobile Club and the war ministry. The scheme was that both the railway and telegraph service was out of order and messages had to be urgently delivered at a point 156 miles distant from Vienna. The test was made by relays, each motorist covering about 50 miles. One message was delivered in 8 hours 29 minutes, while another, sent over a different route, required 9 hours 33 minutes to reach its destination. The military authorities were well satisfied with the experiment, which will soon be renewed on a larger scale. Archduke Leopold Salvador followed one of the tests from start to finish.

## EMMANUEL A MOTORIST

Italian motorists are jubilant at the new evidence given by King Victor Emmanuel of his liking for automobiles. The Automobile Club of Italy, with headquarters in Milan, having recently named the king honorary president, advised him of its intention to present him with a special insignia, and that it would make a run to Rome in motor cars.

The king informed the club that he would be glad to receive the distinction and would meet the club himself somewhere on the road. Twelve members were delegated and began the journey to Rome. All along the road other motorists joined the party, which soon took the proportion of a small army. The mem-

bers of the Automobile Club of Rome started to meet the visitors, who were met several hours out from Rome by the king and his officers and other members of the royal party. Emmanuel got out of his car and greeted each of the visiting delegates, inspecting their cars and asking many questions relating to the run.

## NO MACHINE FOR FIRE CHIEF

During the last week of the old council, Milwaukee, Wis., various committees recommended postponement of many measures which were pets of certain aldermen, but which later were abandoned. One of these was a resolution introduced in the council in 1900 by George H. Chase, providing for the purchase of an automobile for the chief of the fire department and one for the first assistant chief. By the action of the old council the measures are now likely to die a quiet death.

## EXPORTS ON THE INCREASE.

The latest compilations of the department of commerce and labor show that the exports of automobiles and parts thereof continue to increase steadily. In March a year ago the exports were valued at \$93,618, increasing to \$164,400 in March of this year. During the 9 months ending March, 1904, the exports were valued at \$1,305,777, as against \$759,841 for the same period of 1903 and \$517,532 for the 9 months of 1902. The progress the automobile manufacturers are making in the foreign field is very substantial and reflects great credit on the industry.

## MOTOR CYCLES TOO FAST

Since the enforcement of the speed regulations in Syracuse, N. Y., other municipalities throughout central New York have taken similar steps. Chief of Police Barnes, of Cortland, has purchased a stop watch, so that he can time drivers. At Onondaga a number of motor cycles speeding on the pavement in Main street just about the time people were on their way home from church caused complaints regarding the violation of the highway ordinances without interference from the municipal officers.

## BUFFALO PLANTS BUSY

The Sterling Engine Co., of Buffalo, N. Y., now occupies the old Niagara Motor Vehicle Co.'s plant at 121 Grant street, and is making automobile boats and two-cycle marine engines in single, double and triple cylinder sizes. This plant is particularly busy and has all the orders it can possibly attend to.

The Queen City Automobile Exchange Co. is so more, having gone out of existence with the conclusion of last month. Some of its floors, however, immediately incorporated a new company under the style of the Queen City Garage Co., with J. H. Betts president and treasurer, M. Fischer vice president, F. C. Rupp secretary. This company takes over the agency for the Knox and Orient truckboard and will conduct an extensive garage, as did the old concern. Its location will be at the old cyclorama building on Edward street.

Mr. Beck has opened a garage at 77 Edward street, which was the location of the old Queen City Automobile Exchange Co., and is advertising dead storage at \$3 per month and storage, washing and polishing at \$10 per month, much under existing prices.

## NEW CATALOGUES

"Rigs that Run," in one and three-cylinder patterns, are shown in the booklet just issued by the St. Louis Motor Carriage Co., of St. Louis, Mo. The explanation of the construction of the different models is comprehensive.

The Garrin Machine Co., of New York, has issued a new catalogue of metal working machine tools. It contains much practical shop information.

A forty-page booklet, descriptive of both the gasoline and electric patterns of the Columbian, has just been issued by the Electric Vehicle Co., of Hartford, Conn. It is exhaustively illustrated.

The Stevens-Duryea is fully described in the new catalogue of the J. Stevens Arms and Tool Co., of Chicopee Falls, Mass. The booklet is free from bombastic ad writing and is a good example of conscientious catalogue making.

A catalogue in novel form has been issued by the Automobile Equipment Co., of Detroit, Mich., to exploit the automobile appliances which the company manufactures and jobs. It is both original and extensive in the presentation of a large line of goods.

One of the newest parts and appliances catalogues is that of the Excelsior Supply Co., of Chicago. It lists an extensive line of both special and standard articles.

The Cadillac catalogues, issued by the Cadillac Automobile Co., of Detroit, Mich., is one of those ever welcome plain booklets in which high grade mechanical half-tones, good printing and careful description have been used instead of much ornamentation to give character to the production.

## FOURNIER WILL NOT RACE

In a notice sent to Paris trade journals the concern with which Henry Fournier is connected announced that the latter would not take part in the French eliminating race, nor in any other race. Fournier says that it is not possible to attend carefully to business and racing at the same time, and having won his share of important races he hopes there will be plenty of his countrymen to keep up the fame of France as a nation having the best drivers. A. Ambard will take Henry Fournier's place as the third driver of the Hotchkiss cars in the French trial race. A. Clement, son of the manufacturer, and Cuders were selected besides Henriot to drive the Clement-Bayard cars.

## MOTOR BOATS IN BRAZIL

American vapor and kerosene launches are rapidly winning favor in Para, Brazil. As order for ten small launches has recently been forwarded to a prominent American manufacturer. The kerosene motor has the call is Para, though both are in demand. This is because the price of kerosene is considerably under that of gasoline.

## BUS LINE IN CHINA

Advices from Nienchwan, China, say that there is an automobile line ready to start four machines to operate between the old town and the administration city. Each vehicle will carry ten persons. The machines are now on the ground and will carry passengers for 10 cents each way.

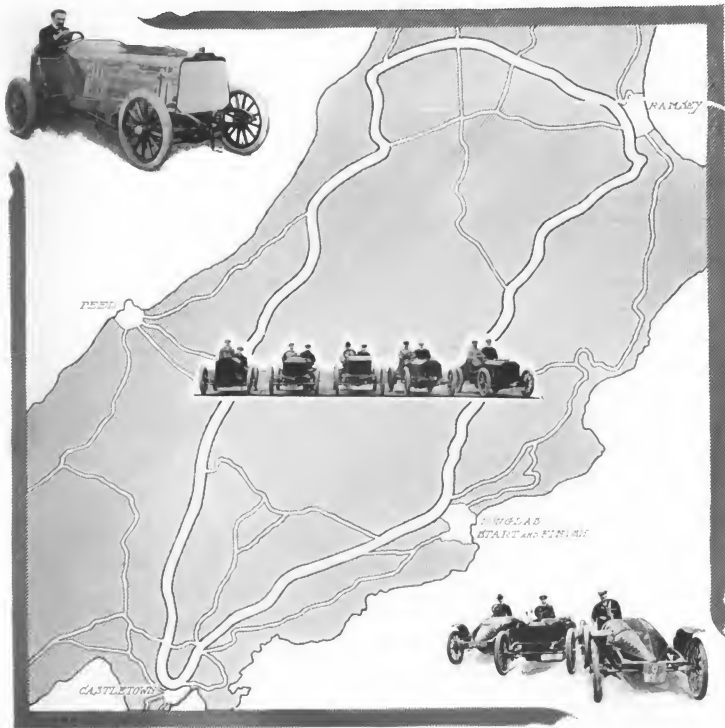
# MOTOR AGE

VOL. V. NO. 19

MAY 12, 1904

\$2.00 Per Year

## ENGLISH TRIALS ON THE ISLE OF MAN



ONE OF THE DARRINGS

THE NAILED QUINETTE

THE THREE WOODSIEYS



# NAPIERS BEST THE FIRST DAY



DIFFICULT TURN ON THE BRITISH TEST COURSE

**L**ONDON, May 10—Cablegram—The British eliminating trials, begun today on the Isle of Man, resulted in one Napier, one Wolseley and all three Darracs being declared out, while four Napiers and two Wolseleys made clean enough records to keep them in the trial events.

The weather condition was most favorable and the roads, after a day of work, were in excellent shape for top speed. There were big crowds at the trials, all hostilities being crowded. The course for the 48½ miles was well patrolled and the arrangements at the start were all that could be desired.

The line-up for the start was as follows: J. W. Stocks, Napier; John Hargreaves, Napier; W. Clifford Earp, Napier; E. Campbell Muir, Wolseley; S. F. Edge, Napier; Sidney Girling, Wolseley; Charles Jarratt, Wolseley; M. Homery, Darracq; M. Edmond, Darracq; Mark Mahew, Napier; C. Rawlinson, Darracq.

The work laid out for today was to run the cars 8 hours over the 48½-mile course, going five rounds. Edge and Jarratt covered the first round in 1 hour 17 minutes, keeping close together all the way and making all controls according to the rules. Hargreaves, Girling and Earp followed in a bunch 3 minutes later. Stocks' time was 1 hour 22 minutes, and Homery came in 7 minutes later. Both Muir and Girling suffered punctures, but the latter made a quick repair and lost little time.

The five Napiers and two Wolseley cars, Jarratt and Girling, survived the second round. In the third round Edge gained 24 minutes on Stocks, with the others but a few minutes back.

At the end of the fourth circuit, Edge was leading Stocks, his time being 5 hours 59 minutes, and Stocks' 6 hours 4 minutes, so that Stocks covered this lap considerably faster than Edge, having made up all but 5 minutes of his previously lost time.

In the fifth and last lap Stocks' machine sprang a leak in a radiator tube, Edge lost considerable time through a puncture, Girling had to go along with only three cylinders working, and Earp, going well, made substantial gains.

The fifth and last round was finished by Earp, Stocks and Edge in a bunch in the order named in 7 hours 53 minutes. Edge's puncture and Stocks' leaky tube having permitted Earp to get to the front. Jarratt finished in 7 hours 5 minutes, and Girling in 7 hours 59 minutes.

Tomorrow the hill-climbing tests will take place at Ramsey, where the road rises on the average over 200 feet per mile for 6 miles. This road is up a veritable mountain side and will thoroughly test any car's ability.

Thursday the speed trials take place over the Douglas promenade, which are some 2 miles in length, giving opportunity to run a car at top speed for a full mile.

## ISLE OF MAN COURSE

The Quarter bridge road, where the start of the road race was given, is located between Woodlands and Bray hill, about a mile from Douglas, which is the most important city in the Isle of Man. At the start the ground is level but after a quarter of a mile the road becomes hilly, the grades ranging from 1 to 7 per cent. After a few miles of this kind of ground a flat, wide stretch runs for about a mile with a slight downward grade when reaching Bray hill. From there to Governor's bridge a beautiful, level piece of road permits the running of the cars at full speed. All along this part of the course the scenery is very pretty and quite typical of the English country in general.

From Governor's bridge to Ouchan the road is almost circular and the drivers have to be very careful, as there are several spots which are dangerous and also a number of cross roads which may mislead if the greatest attention is not given. After getting out of the little village the road again becomes hilly for about 500 yards, but when nearing White bridge hill becomes level. About an eighth of a mile from the hill the road becomes suddenly very steep and the decline continues for about half a mile. This is one of the most difficult parts of the entire route.

Laxey, about a mile distant, is the next town on the route, and the road leading there is flat and permits good speed. When entering into the village it was suggested that the drivers slow down considerably on account of several railway and street car crossings and a number of sharp curves. In getting out of Laxey there is a fine piece of level road fully 20 miles long, leading to Baldrine hill. The scenery from the top of this hill is splendid, and compares favorably with some of the better known view points in Europe. As a matter of fact it would be difficult to find a more interesting spot, and even in Switzerland there are very few mountains or hills whence a more enjoyable view can be obtained.

An almost level road runs then to Coney hill. It is several miles long and gives a good

opportunity to a motorist to gain several minutes on a near competitor, unless the competitor likewise takes advantage of the speeding chance. However, unless the man in the car keeps his eyes wide open he might get into trouble, because just a few hundred feet from Coney hill the road takes a very sharp turn and then goes up a pretty stiff grade. It is a difficult stretch and the cars must slow down.

After passing this steep hill the road becomes again fairly level and for several miles there are no difficult stretches; but there are many crossings. A curve leads to Balnure bridge, where there is an electric railway crossing. Ramsey, an important town of the island, is located about a mile further, and after leaving this town there are no hills for a distance of about 10 miles. This entire stretch of road is perfectly level, wide in some places, very narrow in others, but always of fine surface, which permitted the greatest speed the cars could develop.

The village of Ballaugh is next on the route, and then come several other villages, with nothing special as road features until Glen Helen road is reached. From here to Bellahaine, a stretch about 7 miles long, the road is in turn level and hilly, but not so difficult as parts of the first portion of the route. When nearing Craig Willie's hill cars had to be slowed somewhat on account of the very steep grade, which continues for nearly a mile, with two sharp curves at the bottom of the hill.

From Bellahaine to Foxdale hill there is a level stretch and also a nasty piece of steep grade, short but very steep. The Foxdale hill is also a difficult one to ascend, but after this is overcome there is a stretch of fine level road about 7 miles long, leading to Silverburn hill and bridge. From there to the Malen cross roads the course offers no difficulties, but soon after there is a sharp turn, followed by a number of short alternate good and bad stretches, with many crossings which compel the driver to be careful and to go at reduced speed, until Douglas road is reached. On the way to Lanton there are many bridges, curves, up-and-down roads—in fact, a perfect specimen of difficult roadway. It is here that speeding cars find the bulk of their troubles, and much depends on the handling of the cars in this section as to the ultimate outcome in covering the course.

From Lanton there is a straight run to Robmond hill, which is considered a very difficult one. From there on the road leading back to

the starting point, Quarter bridge, is good and enable fast running.

For several weeks the authorities had been working on the road to make it not only safe but speedy as well, filling holes, repairing bridges, leveling bunnocks, and, in fact, doing all possible to make the race a success.

### THE CARS TESTED

The eleven cars entered for the eliminating trials included five Napiers, three Wolsleys and three Darracqs. They vary from 50 to 100 horsepower and average about 2,000 pounds in weight.

The five Napier cars are of four different sizes, the most powerful of which is Mark Mayhew's 100 horsepower machine. Next is the 70 horsepower car driven by S. F. Edge. Of the remaining three cars there are two 60 horsepower vehicles, to be driven by John Hargreaves and Clifford Earp, while Mr. Stocks' car is a 50 horsepower machine. In general respects all these vehicles are of similar design.

The three smaller vehicles have armored wood frames, whereas the others have pressed steel frames. They all have four-cylinder engines, the cylinder walls of which are jacketed by a single aluminum casting. Except on the 100 horsepower car, the inlet valves are atmospherically operated; the valves being of the Napier quadruple type. All the clutches have metal-to-metal friction surfaces, and those on the three smaller vehicles are fitted with four engaging springs. Some little modifications are found on the larger clutches, among these being that three springs are provided instead of four, and the clutches are not quite the same even on the two big cars. A high tension system of ignition has been adopted throughout, but the only racer which has the new synchronized Napier ignition apparatus is Mr. Edge's car. The tires on all these cars are 34 inches in diameter, and except on the two largest they are all of equal size, being 95 millimeters wide, on the 80 horsepower and 100 horsepower racers, however, the driving wheels have 120 millimeter tires. The tires are of the Dunlop non-skid style. Some little differences exist on the different machines in the system of lubrication which is adopted, for, whereas

on the two 60 horsepower and on the 50 horsepower cars an automatic mechanical lubricator is used, a drip-feed, supplemented by a hand pump, is found on the 80 horsepower and 100 horsepower models. The transmission gears on all the cars provide for three forward speeds and a reverse, and are so designed that a direct drive is obtained on the high speed. On the 100 horsepower car roller-bearings are used throughout the gear box, but plain bearings are fitted in the gear on the 80 horsepower model. A new design of back axle, too, has been adopted on the 80 horsepower car, though the axle on this machine is the same as on the others inasmuch as roller-bearings are used for it, and the thrust of the level wheels driving it is taken by ball-bearings.

The radiators have been considerably increased in size this year. They are of the honeycomb type, and are provided with belt-driven fans. In the two larger cars, the circulating pumps are chain driven and on the smaller vehicles these pumps are driven direct from the engine. The wheel-base is in all cases long, and on the 80 horsepower car is 8 feet 8 inches.

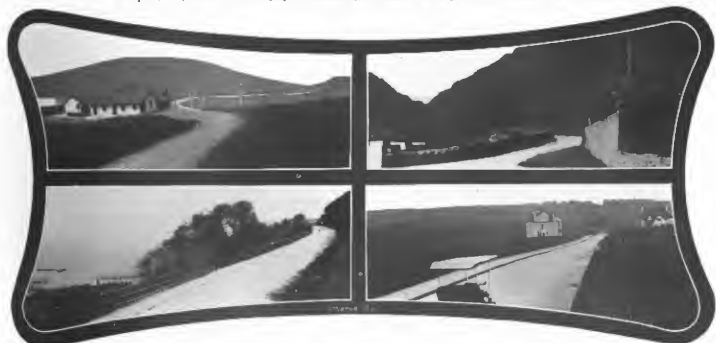
The three Wolsley cars entered include two of the more recently designed 96 horsepower cars, called the Beetles because of their peculiar, flat bodies, and a 72 horsepower car. The shell-like shield projecting forward from the front of the bonnet of the big cars is not only intended to act as an effective windcut, but also to direct a powerful current of air through the large circular multitubular radiator. The four horizontal cylinders lie alongside one another, and in this respect they constitute a radical departure from previous Wolsley engines—including the 72 horsepower car. The cylinders project forwardly from the crank-chamber, and have atmospherically operated inlet valves. A very noticeable feature of these racers is the arrangement of the mechanic's seat on a very low level, with a deep well to accommodate his feet. In order to arrange for this, the speed change gear lies on the right side of the car, and it is only the differential countershaft that passes across to the other side. An extraordinary small starting handle is employed, considering the size of the engine,

and this is reeled possible by entirely cutting out three of the cylinders and by putting the fourth on half compression, when starting.

The engines on these large cars are—contrary to usual Wolsley practice—fitted with governors, but the governors are mounted in an unique position, being fitted to the rear end of the fan spindle. They act upon the throttle valves and are subject to the control of one of the hand levers that is fitted above the steering wheel, the other small hand lever alongside it varying the time of ignition. The fan lies immediately behind the radiator, and is driven by a belt from a longitudinal shaft projecting forward, from the engine. This shaft primarily drives the circulating pump through worm gearing. The pump, the fan, and the governor are all rigid with the radiator and are flexibly connected with the engine. The radiator has four rows of tubes, those in the rear row being straight and those in the front row being bowed out forward.

The main clutch is operated from the pedal through a rod lying outside the frame and the dust proof casing, and the necessary adjustment for the clutch is provided by a left and right-hand connection in this rod. Provision is also made for enabling the mechanic to prevent the clutch from slipping, if at any time it should tend to do so, and for this purpose there is a small hand-lever mounted to the left of the pedals near to him. The main fuel tank lies at the back of the car on a lower level than the carburetor, and there is a strong shield beneath it to prevent it from being fractured by loose objects flying up from the road. A pressure is normally maintained in this tank from the exhaust gases, and a hand pump is also fixed near the mechanic's seat for the same purpose. Large, and very easily removable, filler-caps are fitted to the tanks, and there is a supplementary fuel tank mounted on a higher level than the carburetor, to feed the engine, whilst the main tank is being filled. The speed change gear provides for four forward speeds and a reverse, is driven by a Renault's silent chain, and has its shafts mounted in ball-bearings. Dunlop tires are fitted.

The three Darracq cars are all identical. They were built by G. and J. Weir, Limited, of Glasgow, in a remarkably short space of



SOME OF THE PICTURESQUE STRETCHES OF THE BRITISH ELIMINATING TRIALS COURSE ON THE ISLE OF MAN

time, from designs furnished by A. Darracq & Co., of Paris. They, like the Napier, are of the live-axe style of construction, and, like all the competitors in the eliminating trials, have four-cylinder engines. The cars have pressed steel frames, and the engine is covered by a large square-shaped bonnet that meets the honeycomb radiator in front, and the boat-shaped body, with its curiously-shaped dash, at the back. The engine has all its four cylinders cast separately, and these are bolted as usual, to a large aluminum crank chamber. The bore of the cylinders is 160 millimeters, and the stroke is 140 millimeters. The inlet valves, which are of large size, are fitted centrally in each cylinder head with the spindles projecting vertically upwards. The valves are actuated by rocking levers and vertical push rods, from the same cam shaft as the exhaust valves, the cam shaft and the exhaust valves being on the left side of the engine. Both low tension and high tension ignition plugs are fitted, all of those being on the right side of the engine. The magneto for the former is fixed on this same side and is gear-driven from the cam shaft that operates its igniters. The commutator for the high tension system is fitted right in front of the car just beneath the radiator, and the wires from the coils on the dash are led through a neat casing to the ignition plugs. In the arrangement of the gear wheels on the front of the crank chamber the pinion on the crank shaft not only drives an idle half-speed gear, but also the circulating pump, large and small spur-gears both mesh with the idle wheel, the former being on the front end of the cam shaft operating the inlet and exhaust valves, and the spindle of the latter being used for driving the fan. The commutator is mounted in line with the cam shaft so that it, too, is driven by the large gear. Another spur-gear, driven by the small main gear drives a wheel upon the shaft on which is mounted the cams for operating the lowest tension igniters. All four cylinders are fed from a single carburetor through induction pipes of very large size.

The main clutch has metal-to-metal friction

surfaces, and is, as usual, fitted into the fly wheel. The speed-change-gear gives three forward speeds and a reverse, and is so arranged that a direct drive is obtained on the high speed. Nickel steel is used for the gear wheels, the axles, and the shafts. The foot brake and the hand brake act direct upon the hubs of the rear wheels, both internal and external brakes being fitted to them, as on the Wolseley racers. The center of gravity of the cars has been kept very low. The wheels are shod with Michelin tires specially manufactured in Great Britain, those for the driving wheels being 815 by 120 millimeters, and those for the front wheels 810 by 90 millimeters.

#### FRENCH COURSE CHANGED

While preparations were being rushed for the French eliminating race which is to be run May 20, information was suddenly received at the Automobile Club of France that the minister of the interior had decided upon reports from officials of his department that the original route of the Circuit des Ardennes, which is approximately 80 miles long, would be considerably shortened.

No especial reason was given at first and the unexpected information created a sensation among the members of the club and later among the interested manufacturers and drivers. Protests were made at once, but the officials of the ministry had made up their mind and would not argue the case. A hurried meeting of members of the sports commission of the automobile club was called and although the majority of the manufacturers had protested against the proposed change it was decided that owing to the short time which was available until the race was to be run, that the best plan would be to accept the government's decision.

On April 29 a meeting of protest was held and for a while characteristic French excitement prevailed, several of the members even going so far as to suggest that the French manufacturers withdraw entirely unless the government would permit the race to be run over the original course. Rene de Knyff finally

succeeded in convincing the others that it would be unwise to do anything else than to accept the condition imposed by the minister of the interior. He urged that to withdraw would be detrimental to the trade and industry and that to argue the matter would be a waste of time. It was further brought out that the new circuit was the same as the old one except that it was shortened, the officers of the government having found that there were too many thickly populated localities along the old route and too many dangerous stretches.

Much regret has been expressed that so much unnecessary work was done on the original route. Hundreds of laborers had been employed fixing up bad stretches, putting up fences, levelling the ground, and making curves less dangerous. Every day many of the drivers who will be in the race may be seen going over the route in racing cars. At intervals on the road racing encampments may be found. The Hotelkiss, Gobron-Brillie, Darracq and other outfits have established regular supply depots along the route.

There will be four neutralizations per circuit, or twenty-four all told. Inasmuch as there will be twenty-four starts and twenty-four stops beside the first start and the final stop, it will be necessary to take fifty times for each car. If all of the twenty-nine racing machines start it means 1,450 times to be taken by the timekeepers in the eliminating trials.

Another serious question has been agitating the officials of the Automobile Club of France—the question of time to elapse between the starting of the competitors. Many want the minimum to be 5 minutes, claiming that otherwise it would be very possible for cars to overtake others and be overtaken, as the road, in general, is not wide enough to safely permit more than two cars to run side by side. It is feared that accidents might occur if the starts are made at intervals of 2 minutes. The matter has not been finally settled. This and other details of the contest are being rapidly settled, however, and it is thought that the trial race will be run without hitch or confusion, despite its large entry list.

## DIARY OF THE AMERICAN TEST

**C**LEVELAND, O., May 7.—The American Gordon Bennett "elimination trials," held in Cleveland last Thursday, proved great disappointments to all concerned, as both the Peerless and the Winton cars met with accidents that threw them out of the running.

The tests on Clifton boulevard were witnessed by only a few enthusiasts, who were notified as to the place for holding the trial. The investigating committee arrived Thursday morning and it was not until after a conference with several prominent local men that the place for the trial was settled upon. Messrs. Morris and Butler immediately went to the Peerless factory, while the other two gentlemen accompanied Messrs. Winton and Shanks to the Winton factory. The two Peerless racers were taken over to the Winton factory, where they, with the Bullet II, were thoroughly inspected and weighed.

Owing to the fact that the second Peerless car had only just come out of the factory, it was decided to try out only the first car. This was illustrated in a recent issue of *MOTOR AGE*, but for the speed trials it had been altered by

the substitution of a coil radiator suspended below the front in place of the radiating tubes extending around the side. Mr. Moores deciding that the latter were too much in the nature of an experiment to risk in a trial of this character.

On leaving the Winton factory Mr. Butler went with Oldfield in the Bullet, while Mr. Morris was with Moores in the Peerless. The men were ordered to let out and not to stop until told to do so. Oldfield had the best of the start and was never headed, so there was no brush or opportunities of comparing the speed of the two cars. The course was far from what could be considered a sample of road conditions. As a matter of fact it would appear that Glenville track would have been a much better place to demonstrate the speed and endurance of the cars, and in its present rough condition the track would have come much nearer to road conditions than Clifton boulevard, which is a dual level course about 5 miles in length and 50 feet wide, a considerable portion of it paved with asphalt, and the balance of unmacadam, having the same degree of hardness and, if anything, being much

smoother and faster than the asphalt portions.

A straight section of 3½ miles in length had been measured off on a portion of the boulevard where there was the least number of houses and cross streets. Up and down this piece of boulevard the two big cars tore at what seemed to be the limit of their speed, although both drivers have since declared they never let the machines out to their limit. In fact, it would seem almost impossible to do so, for the cars could hardly get under full roadway in the 3 minutes or thereabouts required for the length of the course, and an attempt to turn on the street while at high speed would have meant certain destruction.

After Barney got accustomed to the trick, he did some hair-raising stunts on sharp turns, but Moores was less venturesome and lost time at the end of every stretch. To a man up a tree it didn't look much like an endurance contest; it seemed to be more like a case of four men having a couple of fast cars at their disposal and taking turns at enjoying the sensation of riding at the rate of a mile a minute. Every once in a while the committees would change off which would necessitate stops.

and then they would go at it again. No one seemed to keep any record of times or how far they went, and, of course, with such turns and occasional unnecessary stops to let the committee change off, there was no possibility of making anything like records. Evidence of the failure to keep tab on the laps is shown by the fact that when interviewed at the Hollenden hotel in the evening, one of the committeemen stated that Oldfield had covered only 66 miles when his accident occurred, whereas Messrs. Winton and Shanks, who were interested spectators at one of the turns, declare that Barney made fourteen round trips, or 93 miles in 1 hour 45 minutes. If this is a fact, it would seem that the Bullet did about all that could be expected of it, as it had been generally understood that the trial was to be for only 100 miles.

Both the cars certainly showed remarkable speed possibilities. The Bullet especially maintained its reputation as a wonderful short distance car, for at times it was turning at close to 70 miles an hour. Alexander Winton claims to have timed one lap of 7 miles in 5 minutes 30 seconds, and one of the members of the committee after the trial admitted that either of the cars was capable of 75 miles an hour. Once while traveling at top speed Barney sighted a big black dog leisurely crossing the road ahead of him. The tooting of horns only served to confuse the animal and Barney had to negotiate one of his famous curves and only just missed a collision that would probably have meant death for two men. The committeeman who was in the car will not forget that incident in a hurry.

Moers was the first to retire. The committeemen claim he went 51 miles, but Moers thinks it was more. The car got to going bad and finally it came to a stop. Examination showed that the speed change gears had been wrenched and did not mesh perfectly. Moers at first stated that a stone had been picked up due to the dust cover being removed. A more careful examination, however, disclosed the fact that one of the pistons had tightened so that it could hardly be moved. At the Hollenden hotel in the evening Moers informed the Motor AGE man that the difficulty had been caused by one of the pistons being a trifle over size. On the previous road tests this had not been apparent, but after the car had become thoroughly heated the piston tightened and greatly retarded the speed of the car. It finally got so tight that the gears were forced out of position and then the car stopped; it had to be towed home. Moers stated that he knew the other car had the same defect, hence he did not care to give it a trial after the accident occurred.

Oldfield's mishap was caused by the breaking of a pin on the pump connection, which threw the pump out of commission, causing the water to boil. Before the stop Barney's car looked like a steamer in cold weather as it tore up and down the boulevard. This accident had occurred in previous contests, so Barney claims, and he did not stop until it was absolutely necessary to do so. After the same had been stopped the Bullet cooled off and Barney went back to the factory under his own power. The breaking of the pin was a defect that can easily be remedied by replacing it with a stronger part, and it is claimed by some, that in a race a temporary repair could have been made; in any event the car could have been kept going by frequently replenishing the wa-

ter supply if stops had been taken for this.

After luncheon the party took a trip through the boulevard and park system and went over to the Peerless factory and made examination of the Peerless car. They left for New York early in the evening.

The members of the committee declined to give any statement for publication Thursday evening, although one of the gentlemen admitted that the cars had shown remarkable speed.

Before the committee left the Winton company sent a formal communication asking that the gentlemen remain until the next day in order that the Bullet be given another trial, but the committee declined to consider the matter.

Louis P. Moers has not yet given up hopes that the committee will reconsider its decision and will give the cars another trial. He stated this afternoon that he intended leaving for New York on Tuesday and that he would use every argument possible to have the investigation reopened. He stated that he could easily alter one or both of the cars so that there could be no possibility of a repetition of the accident that occurred before and he expressed himself as satisfied that with another trial the Peerless would make a satisfactory showing.

When questioned on the subject, he admitted that he did not have much hope that the committee would change its opinion, but nevertheless he would make another effort. Incidentally he stated that he felt satisfied in his own mind that the committee would probably decide to withdraw the American team entirely from the contest and make no further attempt at the cup until American cars could be built that would demonstrate beyond question of a doubt that they possessed speed and endurance sufficient to win in a race of this character. He stated that with this in mind he would place his entry at once for the 1905 contest and he would start work this summer on a special car designed for that contest, "and you can wager," said he, "that the car will be thoroughly tried out before it goes into any official trials."

#### A. C. A. HESITATION

New York, May 8.—Decision as to the make up of the American team in the international cup race or whether this country will be represented at all in the coming contests on German soil will be made not later than Wednesday, but probably on that day following the meeting of the governors of the Automobile Club of America, to which the racing committee will report the result of last Thursday's trials of the Winton and Peerless candidates at Cleveland and the test of the Christie arjant yet to be made.

Walter Christie's car will probably have its trial Tuesday. It will be taken quietly to some suburban road, probably on Long Island, that day and put through its paces in the presence of the committee, its advisers and a coterie of newspaper men, who may be trusted to give the tip as to time and place in advance.

Dave Hennen Morris, of the committee; S. M. Butler, secretary of the club; William P. Kennedy, whose business is that of consulting automobile engineer, and William C. Gottshall, whose precise function at the trials beyond that of a mere curiosity seeker has not been made very plain, returned from Cleveland Friday morning. A meeting was held that day which all these gentlemen attended and at

which George Isham Scott, also of the committee, and President Searrett, ex-officio, were also present. O. W. Bright, chairman of the committee, is abroad. W. G. Brokaw, the other member, did not attend.

The result of the meeting was the sending of the following telegram in duplicate to Alexander Winton and Louis P. Moers: "Report made to racing committee, which has decided to have no further trial of your car. Committee will announce decision not later than Wednesday." This was by way of reply to the request made at Cleveland by both candidates for a further trial of the cars coincident with the Christie test.

It is surmised that the decision will be against sending either the Winton or the Peerless car to Germany, it being inferred that had the committee considered the accidents that put an end to the Cleveland trials mere unimportant detail defects, easily remedied and not seriously affecting their ultimate chances of lasting the cup course and covering it in creditable time, they would gladly have afforded their owners a chance to make the trifling repairs needed and demonstrated the real worth of their racing machines.

As a matter of fact, it was strongly hinted that the press dispatches did not tell correctly, or at least all, that had happened to the cars during their trial. The newspaper men were forced to get their information from outsiders and in part from those naturally and exensively interested in minimizing the breakages that had occurred and the failure of their cars to make good in speed and endurance beyond dispute. The whole story, from the point of view of the investigators, will be told in the committee's report to the governors. The authority and responsibility of the decision to be announced will rest with the committee.

Patriotic considerations, regard for the committee's good intentions and the embarrassing position in which Mr. Morris and his associates find themselves this year will probably, and very properly, prevent the appearance in print of the full story of the trials and their results. The patriotism and pluck of Mr. Moers and Mr. Winton in the face of last year's failure in again making an attempt to have this country represented in the international contest deserve and receive only the highest commendation, and it is felt that every possible consideration should be shown them. The regret is very generally expressed, however, that more American makers did not see it their patriotic duty and to their personal interests as well to build cars in competition for places in the team that the United States might have had the benefit, at least, of the choice of the best of many makers, instead of being restricted to the chance success of only two of them, however able and prominent as designers and builders.

The A. C. A. has shown no signs yet that it fails to realize its responsibility to the sport and industry of the country in naming or rejecting would be candidates to the end the United States shall be creditably represented in the great contest or wait until its automobile builders in general shall really arouse themselves to the desirability of proving their ability to make cars that can go as far and as fast as any nation's, and that in speed and endurance in such a trial can demonstrate constructive success commensurate with the attainments of the American art in the matter of the manufacture of vehicles for mere pleasure use. Leaving out of consideration the lack of



A PORTION OF THE CLEVELAND PARK BOULEVARD

general and practical interest of our makers in diverting their attention to this end from the building of purely pleasure vehicles and their failure to appreciate that cars built to succeed in the long and strenuous international cup contests will find a ready and big priced market, as high power touring cars will aid the competition with European makers of racing fame, and will altogether raise the standard of the American product, it seems opportune and only fair to call attention at this time to the serious handicap our builders labor under through the want of these great contests at home, and the absence of any opportunity to try out their high powered products at full speed over courses of extended length.

The practically absurd establishment of the Vanderbilt cup race as an annual late summer event and the throwing open of a trial course of adequate length and variety of road will furnish just the needed opportunity. The opinion is all in favor of its being made an event open to the world, to which the best cars and the best drivers that Europe can furnish may come. It will establish a trial ground and a school in high power and speed cars very much need. The lessons may be hard and bitter at the start, but they will be satisfactory.

MR. P. WINTON  
MOVERS  
ON THE  
BULLET

and are absolutely necessary for the advancement of the art in this country. In the end they will result in the development of a worthy and victorious team for the international cup race. American makers need but the chance to succeed. With tracks available for that sort of test they have turned out the holders of all the world's records at that style of going. With a long distance road course for their trials and

experiments and competitors to furnish comparisons and standards, American speed and endurance triumphs on the highway are as easily possible as have been their unrivaled successes on the track.

Mr. Vanderbilt is now due home from his Pacific coast trip. Announcement of the conditions, time and place of the 300-mile race for his cup may be expected in a day or two. Chairman Pardington has already submitted to the cup donor suggestions in outline for the big race.

#### TRIAL DISCUSSED

New York, May 8.—Barney Oldfield arrived in town this morning. In a talk with a *MOTOR AGE* man he had a story to tell of the trials at Cleveland that is interesting. Barney will endeavor to get a hearing from the A. C. A. racing committee or an interview with some of its members, though he says this is not the sole object of his trip, as he expects to be called for a while with the Winton local branch.

machine, being practically a comparatively low ground touring car, might stand such a test, and so have an advantage over us.

"When the committeemen reached Cleveland they went at once to the Peerless factory and rode over from there in the Moores cup car across town. They asked us to take the same ride with the Bullet. This was impracticable, as our car has but one speed and with its open muffler would raise such a racket as to frighten horses by the wholesale. After a little talk the Glenville track was phoned. The answer came back that it was all plowed up and not available for driving over it.

"We then went out to the Clifton boulevard, where the trials were run over a 3½-mile stretch of asphalt, with runabout turns at each end. There were eight or nine crossings in the stretch, whose rises threw a car in the air and made high speed dangerous and almost impossible. As far as I could see there was little attempt to take our time. As I was making one of the turns, Mr. Winton told me to let her out for a round. I took the risk and did so. Mr. Winton timed the 6½ miles at 5:30. I think Mr. Butler also must have snapped a watch on me, as he was standing by with timer in hand.

"I ran fourteen round trips, or 91 miles, without stop or touching my engine, before the water gave out and my engine heated. This was the accident. One of the buckets backed up and sheared a pin in the driving gear of one of the pumps. This stopped circulation and the water boiled out. To show how trifling was the accident, Mr. Shanks got 5 gallons of water and poured it in and I ran back to the factory without trouble. Such an accident happening in the cup race would not stop me. There are twelve controls in the 80-mile circuit where I could get water from the attendants I would have posted at each control.

"I think the Bullet the fastest car in the world. I am sure that even on the Coney Island boulevard it could show a mile in close to 40 seconds. I am confident it could last the distance. Since the Ormond meet the car has been greatly strengthened, fully 100 pounds in weight having been added. The frame has been strengthened. The crank-shaft has been thickened a quarter of an inch and the rear driving shaft has been enlarged. The axles have been strengthened and new bearings put in. The car has also been fitted with the 1905 Winton carburetor and oiler, both great improvements.

"At Ormond they said the Bullet could not run 50 miles. I drove it 91 miles at Cleveland. I never had occasion in my track exhibitions to drive the car further than 25 miles. At my first public trial after this I propose to run the Bullet 100 or 150 miles to prove to the public that it is a stayer as well as a sprinter. I hope the committee will send us to Germany. If it does I am sure we will do the club and the country credit."

#### THE CHRISTIE TRIAL

New York, May 10.—There is today, after the testing of the Christie racer, a decided sentiment favoring the sending of all three of the American team entrants to Germany as contestants in the James Gordon Bennett international cup race. Inasmuch as the makers are willing to assume the expense and to take the brunt of possible failure, there is little or nothing for the A. C. A. to venture.

failure to win or make a good showing in the big race, would at the utmost affect only the builders of the competing cars. On the other hand the scratching of the American team would be a sweeping acknowledgement of the weakness of American cars generally in the field of road racing. The committee promises its definite decision tomorrow—Wednesday.

The Christie car was tested late this afternoon over a 5-mile stretch of the Merrick road on Long Island, where the trials of last year occurred. The trial was conducted by Committeeman Scott and Technical Expert Kennedy. Four reporters and a half dozen spectators were also on hand. The weather was muggy with spasmodic rain. The course was only in fair condition.

Mr. Scott rode with Walter Christie from Garden City to Jericho and thence to the selected course. Altogether 38 miles were covered, of which 33 were driven at high speed. The 5-mile course was covered four times with the following respective times: 6:14 1/5, 6:08, 5:54 and 6:16. This gives a total of 24:32 1/3 for the 20 miles, which is at the average rate of 1:13 3/5 per mile, or 49 miles an hour.

The car ran smoothly and impressively throughout the trip and without a hitch save a little oil feed trouble. Mr. Christie claimed much greater speed possible and asked the privilege of another trial tomorrow, but this was said to be impracticable by Mr. Scott. As it is, however, the machine made an excellent impression on all present by its obvious strength of mechanism and its smooth running. Mr. Scott says that there was no vibration and no pounding of the engine or any signs of its being strained by the severe shocks it would naturally receive on account of being on the front axle. Coil springs and air cushions at each axle end are used to dispel vibration.

Mr. Kennedy, after the trial, said that the design and construction, while entirely original and somewhat revolutionary, were perfectly practical. The machinery is especially stout, being of nickel steel and manganese bronze.

Walter Christie was hardly in fit physical condition to run the car over the road at its best speed on account of having worked five nights to get the needed remodeling finished in time.

At the last minute the committee ordered the foreign carburetor replaced by an American one and a Kingston carburetor was temporarily fitted. There was a long delay in reaching the rendezvous and a puncture caused by a spike picked up necessitated pushing the car the last mile to the hotel. During a preliminary running of the motor carburation troubles were apparent, but made no appearance during the actual road trial, defective oil feed being then the only noticeable trouble.

In discussing the general situation those present favored another trial of all three cars some time within the next 10 days. The speed of the Winton Bullet was generally praised and the broken pump pin accident considered of trifling import. Mr. Kennedy, in speaking of the Peerless racer, said the only trouble with it appeared to have been that Mooers had fitted a too-tight fit of the pistons in order to insure a high compression. This can easily be remedied. Otherwise Mr. Kennedy was well pleased with the car.

The committeemen were reticent, but it could be seen that they were loth to give up the hope



of an American team and the prospect of another trial seemed rosy, even should the cars not be accepted on the basis of the trials just completed.

#### AMERICANS GIVEN ANOTHER TRIAL

New York, May 11—Telegram—Only a few hours ago there was a cloud of doubt as to whether America would be represented in the cup race, and anxiety was written on the faces of all interested in automobilism in this country.

That doubt has now been removed—the cup candidates will have another trial next week, Thursday, May 19, at the Empire track in Yonkers.

After the return of the examining committee from Cleveland, where it saw the Peerless and Winton cars tried out, it hid itself in consultation with the board of governors of the Automobile Club of America.

The makers interested made an earnest appeal for another trial, claiming they had gone to heavy expense to build the cup cars and that in the trials only small defects developed, such as could be very easily remedied.

Strong pressure was brought to bear on the committee and the board of governors, with the result that another trial was granted.

The event will take place in the morning and be over a distance of 200 miles, in 30-mile runs, followed by quarter-mile controls, in which cars must stop not less than 3 nor more than 5 minutes.

Any supplies other than gasoline and water, must be taken on outside of controls; the only acts permitted inside controls will be taking on water and gasoline.

Messrs. Mooers, Christie and Oldfield fixed their own conditions in conference

with Messrs. Morris and Scott of the committee after the consultation with the board of governors.

The division meets with general approval and the candidates are all confident of making a fine showing in the long distance work. The track may be soft, as the trottlers are now using it, thus preventing it being rolled and worked down to a surface desired.

Both Mooers and Oldfield left immediately for Cleveland to have their respective cars put in the best possible shape for the 200-mile test. As soon as ready, the cars will be hurried eastward to be on hand for next week's event. The Christie car will be looked over and ready for the event, but will be put through a few private trials before the final trying-out next week.

When Barney Oldfield was seen by a Motor Age man he expressed not only delight but his thanks at the outcome, for Barney's one ambition has been to get into the big race. "I'll stake my reputation that the Bullet will not only prove its speed, as it has done," said he, "but will also show its staying qualities. By the next trial and for the big race the car will have no defects, mark my word."

Mr. Mooers was naturally pleased to think that, after all the time and money he had put into the Peerless, he had at least a show to have it in the big race, and said so.

Walter Christie, when questioned over the phone by the Motor Age man said that he was much gratified over the new chance to be given the entrants to demonstrate the fitness of their cars. "My machine is much faster than she showed yesterday," said Mr. Christie, "and I am confident that next week I will be able to drive it fast enough to earn a position on the team. The car runs steadily and despite its unusual construction may be relied upon to stand up under hard, continued running."



VIEW IN CLEVELAND PARK STREET





Published Every Thursday by  
THE TRADE PRESS CO.  
1303 MICHIGAN AVENUE CHICAGO  
Telephone Calmont 3011

New York Office, 514 West 34th Street,  
London Office, American Publication Bureau,  
18 Manor Park Rd., Haringey, N.W.

Entered at the Chicago Post Office as Second  
Class Mail Matter

Subscription, Two Dollars per Year  
Foreign Subscriptions, Four Dollars

Any Newsdealer may obtain Motor Age through  
the Western News Co., Chicago, or any  
of its branches, on a returnable basis

## GROWTH OF MOTORING

**A**CCORDING to official information given out by the French finance administration, there were 19,556 automobiles in use in France during 1903. Of this total, 4,510 were in the Seine department, in which Paris is located, and 4,000 of these cars were reported to be in the French metropolis. Compared to the number of cars owned during the previous year, the total is almost three times as great, the figures for 1902 being 7,260, whereas in 1899 there were only 1,672 automobiles owned in France.

The motor bicycles and tricycles show also a remarkable increase, the total number owned in 1903 being 19,816, compared with less than 10,000 in 1902. Paris and the department of the Seine are at the head of the list with a total of 4,264, of which 3,634 are owned by Parisians.

These figures bring out several interesting and important facts.

Of course the most obvious is the remarkable increase in motoring in a year's time. But this is not the most important, because it is only an illustration of a fact that is taken for granted the world over.

There can be no doubt of the growth of automobiling. Statistics are not necessary to prove it. It is apparent everywhere, even to the most casual observer of the progress of the industries and the changes in the customs of the people.

Of greater moment is the fact that there were not so many automobiles in use in France in 1903 as in the United States. Even with due respect to the difference in population a natural conjecture would be that this great producing country—the nursery of the industry—would be the greatest using country now; that the number of cars in use per 1,000 of population would be three or four times that in England or America.

Enough is written of automobiling in France to warrant the layman to believe that horses have been driven from the streets, almost. No such condition exists in France. The growth of automobiling is there about on par with its progress in other countries. France as an automobile center has been advertised by its spectacular motoring and the world's idea of its position in the

field of automobile usage has been thereby greatly augmented.

Just so in the palmy days of bicycling, great advertising, great talk and great racing teams created a general impression that a few certain bicycle factories were about the biggest things on earth. In reality some of the much advertised factories would have made respectable additions to other plants about which there was much less talk.

Advertising, especially of the shouting variety, is a great thing. It has made the world believe that France is a hot-bed of motors—that every third vehicle on the boulevard is a 90-horsepower racer. France certainly is a hot-bed of motoring, but no more so than England and the United States. The germ has attacked the whole human race. French blood is no more attractive to it than Anglo-Saxon.

Paris, the mecca of automobilists, had in 1903 but twice the number of automobiles in use in Chicago, only a slight advantage in number per thousand persons. Los Angeles, Cal., probably possessed a greater number per thousand persons than Paris.

Where the demand is, there will the supply be. The producing ability of the United States will necessarily equal the increase in the use of the motor car. France cannot hope to be always the producing center of the world. The demand in other countries will surely and steadily even the ratio between use and production and there is every indication that the United States will eventually lead in both.

Another and almost equally important fact is brought out by the figures of the French bureau. This is the equalling by the motorcycle of the total number of automobiles.

Here is France with fewer automobiles than the United States, but with about ten times as many motor cycles.

Why?

Simply because France has roads which render motor cycling enjoyable.

The motor cycle is popular in England also. England has good roads.

It has not been widely introduced in the United States. The United States has abominable roads.

Roads or no roads, the automobiling interests of this country are equal to those of any other. Given good roads, and they will be enhanced at a bound in a marvelous degree. Then add the encouragement to motor cycling and the United States becomes the leading nation in all affairs motoring.

The industry will follow the flag. The flag is the banner of improved highways.

## AMERICAN REPRESENTATION

**F**INAL decision as to whether America will have a team in the James Gordon Bennett international cup race, has been deferred until next week.

The Winton, Peerless and Christie cars will each be given another test and possibly one, two or all may be accepted as cup challengers.

This is a wise move on the part of the board of governors of the Automobile Club of America.

America cannot afford to "lay down" in this matter until it is absolutely proven that the cars are not worthy to represent her.

There is a strong likelihood that the machines, one or all, are good enough to give us a creditable representation.

A thorough test to determine the qualities of

the cars more definitely than was done at the tests just completed is due the cars and their builders and drivers.

Then also it is an open question if it would not be better to take a chance with doubtful cars than to slip out of the contest altogether.

We were beaten badly last year. We said we would come again and keep on trying.

There is honor in being honorably beaten. There is little of anything in "laying down."

It certainly seems worth while to take a chance. There is no use in declaring ourselves out of a race before it is started.

## INCORPORATING THE N. A. A. M.

**T**HE members and executive committee of the N. A. A. M., which now carries the letters "Inc." after its name, performed a rather remarkable feat on Wednesday of last week. Commencing at 10 a. m. five meetings were held, the affairs were transferred from the old association to the new, and yet, despite an adjournment of 2 hours for lunch, etc., etc., the gathering dispersed before 4 p. m.

Two conditions were necessary, namely: Complete harmony and well lubricated arrangements. Both prevailed, especially the lubrication, and it is questionable whether it would have been possible to have put through so complicated a piece of business in better style or in shorter time.

First, there was a meeting of the incorporators of the new association, who elected to membership all of the concerns which had consented, in writing, to the change. Next came a meeting of the members of the old association, to agree upon conditions of transfer of its affairs to the corporation, and to instruct the executive committee how to act in the premises.

Then came a meeting of the executive committee, which prepared a proposal to be submitted to the corporation. Next, a general meeting of the corporation to vote upon the acceptance of the proposal and to elect an executive committee. Finally, a meeting of the new executive committee to elect officers and agree to the proposal made by the old association and to carry on its work.

It was pure formality from beginning to end. All the necessary resolutions—and there were a great many of them—had been prepared in advance, and arrangements made with the members and committeemen to introduce them. At no stage of the proceedings was a dissenting voice raised or dissenting vote cast. It was a pretty example of the facility with which a body of men can work together when satisfied that all are working for the common good, and proved that, since the occurrence of the last annual meeting, the members have grown to understand each other better.

The association, as now constituted, is one of individual representatives of companies and firms instead of the companies and officers themselves, as heretofore. This is necessary because, under the laws of some of the states, it is not lawful for one corporation to become a member of another. In all other respects the plans are practically the same as before.

Membership in the association will hereafter mean something. It is said that it will be the policy to admit only those makers who are known to be successful producers. There were at one time members who could hardly be so classed, but time has weeded them out, and today the association is composed almost exclusively of makers of unquestioned repute.

## JUMP

The farmers of St. Louis county, Mo., say that they cannot go to church on Sunday because their horses are frightened by the automobiles. Missouri farmers are a great lot. First they secured the passage of a state law forcing automobilists to pay heavily for the use of the public highway, and now they are kicking because the motorists avail themselves of the privilege they purchased.

It would please some advertisers if trade papers reconstructed their business and made it customary to sell the reading pages and throw in the advertising pages for good measure. A few would like to have both reading and ad. pages given to them, while still others would probably be pleased with a chalte mortgage on the paper.

Ten or fifteen years ago ministers were prone to denounce Sunday bicycling. Now a New Jersey preacher has started the ball rolling in a crusade against Sunday automobilism. In the very face of this comes the newspaper information from Port Huron, Mich., that "All the automobiles in Port Huron were out on Sunday."

The Chicago Automobile Club has 300 members. On its club run to Indiana Harbor last Saturday three cars started; one went the whole distance, one two-thirds of the way, and one one-third of the way. Thus it may be calculated that the club had two-thirds of one per cent of a club run.

There must be a prize in Iowa for the most stringent automobile ordinance. In the Ottumwa ordinance, now pending, is a provision whereby an automobilist approaching any other vehicle from behind must remain behind or turn into a side street if the team ahead becomes frightened.

Express officials at Rochester, N. Y., had recently left in their care a package which was thought to be an infernal machine. After due precautions were taken it was opened and found to contain a spark coil. This business of automobilists searing the community to death must be stopped!

Praise the good, kind alderman from Chicago's elite suburb, Evanston, who proposes to have the speed limit for automobiles raised from 8 to 12 miles an hour. But does he intend to raise the penalties for violation of the new ordinance in proportion thereto?

Only ugly chauffeurs can get jobs in London. The good looking ones have wrought too much havoc among the hearts of wives, daughters, etc. The owners of the cars must be a homely lot to be afraid of such competition.



A French doctor says that the excellent quality of M. Rigolly's brain had more to do with his recent racing success at Nice than did the excellence of the big Gobron-Brille he drove. This puts Rigolly in the embarrassing position of being compelled to win all the time lest he lose his mind.

Wonder if it does a farmer's heart good when he reads about automobile tour committees prowling around the country looking up "best routes," "available roads," etc.? Wonder, also, if he thinks he's saving anything by having such thoroughfares!

That White mountain track scheme has fallen through, temporarily, at least, owing to the obstinacy of a railroad president. Senator Morgan should not be balked by a little thing like a railroad president.

The lay citizen of Chicago thinks he has to dodge a good many automobiles and motor cycles—about 2,000 when they are all out. Parisians have in the neighborhood of 8,000 with which to contend.

The numerous automobile parades that have taken place all over the country ought to be convincing proof of the popularity of motor-club and the rapid growth of the industry.

An automobilist has been arrested for driving on the sidewalk. It seems as though almost every feature of the history of bicycling is to be repeated in automobilism.

Pretty soon a city without an automobile school will be considered behind the times.

The Kansas farmers haven't disciplined an automobile owner for nearly a week.

Say, Holland, who is this Schwartzkoffski you are talking about all the time?

Some automobile factories are as backward as Spring herself.

## SPARKS

Henry Fournier declares that he has retired from automobile racing. He says he has had his share of the glory and believes that there are enough other good drivers in the country to keep up the fame of France. Nothing like having a "hunch" while there is still time to get out gracefully.

The president of the New York Ceneching Club says that automobiles are "common" and that for the "400" the coach is the vehicle par excellence. It's a wonder the "400" hasn't discovered that the wearing of clothes is nominally "common."

The near future will bring, not a uniform speed law, but one which shall provide that automobiles shall be run at a safe and reasonable rate of speed, according to circumstances and conditions, with the burden upon the operator.

The manipulation of cars in parade events has shown the folly of practically minimum speed limits and as a result laws and ordinances are being so altered by observing and progressive bodies as to permit increased speed.

In passing the Hill-Cocks bill, the New York legislature should have gone a little farther with the penalty clause and provided that for a fourth offense the offender should be required to commit the entire bill to memory.

Augustus Post has headed southward through Illinois looking for the best road to St. Louis. He should be followed by a relief expedition, supplied with a generous quantity of rope and blocks and tackle.

Some of the French cars at the world's fair have plates on which is printed "Built for American Roads." If the plates read "Built for American Money" they might be more nearly truthful.

It is all settled now. The Hill-Cocks law is in effect. How nice it is to know that this legislative business has been finally given the finishing touches!

It is all settled now. The Hill-Cocks law good in Salt Lake City, Utah. This is funny; the trade ought to be mainly in wagonettes.

Because there have been no failures among automobile manufacturers for five or six weeks is no indication that summer is over.

The country club house is becoming popular among automobile clubs. The marriage license clerk will be busy next fall.



## PITTSBURG DEEPLY IN IT

**Motoring from the Standpoint of Business and Pleasure Receiving Most Respectful Consideration in the Smoky City—Already Over 600 Owners of Vehicles—Bus Lines Being Inaugurated**

Strange it is that in Pittsburgh—the dirty, smoky city, noted for its steep hills and sharp curves, with narrow, crooked streets and limited park areas—the automobile should have dared to enter; but it did, and if anyone doubts it he has only to consult the 600 or more owners of motor vehicles who are enthusiastic adherents of the sport. Or he may stand on any of the principal streets for a few minutes and see the great delivery cars of the big stores and breweries speeding up the sharp grades with loads that would balk three Pennsylvania teams. Or note the growth of the Pittsburgh Automobile Club, which from a humble beginning 2 years ago has sprung into a thrifty, energetic organization of over 200 members, among whose number are included many of the wealthiest men of town.

It was chiefly through the efforts of these men that the automobile was first introduced in Pittsburgh. They were tired of the abominably poor street car service which is Pittsburgh's standing disgrace the world over. Carriages were no novelty; quick, easy transportation from homes to places of business, something that would carry them spinning around the city after business hours and on holidays—that was what they wanted, and they found it in the automobile. In the last 5 years thousands of dollars have been paid for automobiles in and about Pittsburgh, abundant evidence that for pleasure and business the machine is a growing favorite.

At the head of the wealthy motorists stands Henry C. Frick, today the most successful iron and steel man in the United States. Mr. Frick was from the first an enthusiast in the sport. Year after year he has sought and purchased better machines. Today he owns two Mercedes cars, one a 40-horsepower, and the other, which Mrs. Frick drives, a 32-horsepower. His latest purchase is a Mercedes car whose chassis was made to order in Cannstadt, Germany, and whose body came from Paris. The machine is of 65 horsepower, with a body 15 feet long, and it will seat seven passengers, the seats being individual. The car is painted red, picked out with gold leaf, and is a model of costly automobile comfort.

Thanks to F. T. F. Lovejoy, another multimillionaire, whose fortune was amassed in the Carnegie Steel Co., Pittsburgh can boast of probably the finest automobile stable in the country, costing \$175,000. It is built of dark grey Norman brick, set in grey mortar, and so laid that the bricks appear to be in a frame. The stable is 172 by 88 feet and has a loggia on the second floor. Mr. Lovejoy has owned more than twenty big machines and now has in his garage a 6-horsepower Pierce Stanhope, an electric brougham, a 35-horsepower Peerless, a 24-horsepower Peerless, a 24-horsepower Pierce, a 16-horsepower Peerless, two 6½-horsepower Pierce machines, and an electric Stanhope. Every machine is housed in a dust-proof plate glass apartment, with every convenience for cleaning, adjusting and repairs. The chauffeurs are exceedingly well provided for, having a handsome sitting room on the main floor and a suite of rooms on the second floor that rivals

its arrangement and finish many of the finest east end residences.

Reuben Miller, Jr., has been foremost in introducing the best machines in Pittsburgh and is prominently identified with the automobile club. Thomas Reed Hartley is another Pittsburgher who is rightly called an expert in automobile affairs, and Reade W. Bailey is ranked among the best-posted enthusiasts in the smoky city. Among other Pittsburghers who take great pride in their automobiles are: W. C. Temple, second vice-president of the club, who uses a Peerless; L. C. Phipps, a Peerless; George I. Carnegie, a Woods electric; Thomas H. Guffey, a Deauville; H. C. Fownes, a Pope-Toledo; W. H. Darley, a 28-horsepower Arrow; Charles Arbutnot, a Pope-Toledo; Wilson Arbutnot, a Pan-American; Joseph Reed, David Reed and George Reed, a Winton; Florence O'Neill, a Georges Richard-Brazier car; Mr. and Mrs. Ross Proctor, a Renault; G. E. Painter, an Autoar; Robert Pitman, a Winton; E. H. Borntraeger, a Clement; H. W. Borntraeger, an Olds; J. V. Sloan, a Columbia; J. V. French, a Columbia; W. Linford Smith, a White; Mr. and Mrs. David Kirk, a Columbia; George Flinn, a Mercedes and a Peugeot.

Pittsburgh women are taking to the sport of automobilism rapidly and dozens of the leading society women of the city can drive a heavy car with as much grace as they can receive at a swell social gathering. Individual owners among them are no longer rare and the dealers in automobiles now rightly consult the blue book for names of women who are fond of out-door sports before sending out catalogues. It is proposed to organize a women's automobile club and within a year Pittsburgh may be treated to the spectacle of dozens of her most handsome women speeding away on her boulevards in a club procession.

Among professional men physicians have taken the greatest liking to the automobile, as it saves the care of a horse and gives much more enjoyment in tedious work. They claim that in 2 hours it is possible to cover as many miles with an automobile as they could do in a half day with a horse. In general, physicians are hearty in their praise of the automobile as a health giver and dozens of their patients have been led back to comparative health by taking the long tours that they advised or touring about the city a little every day in a leisurely manner. Business men of all kinds upon their recommendation are coming to use the automobile more and more and this spring are ordering more expensive machines than ever before.

It is estimated that over 600 private cars are owned in Pittsburgh. In spite of the general business depression, the outlook for a brisk trade was never so good. Banker Bros. have already delivered over fifty machines to city customers in the face of a season fully a month late, and have orders for fifteen machines now, which will be delivered by May 15. The Standard Automobile Co. has sold thirty-five machines, and other leading companies in the city have done proportionately well. The Pierce machine is a great favorite with late buyers,

and the Pope-Toledo is also selling well. This business this spring is noted for the number of high-priced machines sold. In the cheaper grades the Oldsmobile holds a first place.

The automobile is also coming into use rapidly among merchants for delivery. When the first delivery cars were bought all sorts of predictions were made that they would not succeed on the steep grades with their heavy loads. But as one after another outdrew and outdistanced the strongest four and six-horse teams, merchants, both wholesale and retail, began to buy, and now a heavy delivery car covered with mud from its swift run is no longer a novelty. The lowering companies have found them to be a great advantage. Some of the largest stores in the city also use them, among these being the great establishment of the Joseph Horne Co. When James McCreery & Co., of New York, move into their new skyscraper, which was built in Pittsburgh for them, next fall, they will deliver all their goods with automobiles.

As a means of travel in the suburbs and surrounding country the automobile has made wonderful advances in favor in the last 2 years. The tough, muddy roads of Allegheny and adjoining counties are a great drawback to such use, for it is almost impossible for any but the most experienced operator to guide a machine up and down the steep, crooked hills of western Pennsylvania in the condition they often are found. In spite of this fact suburban automobilism is increasing at a rapid rate. Sewickley, the most aristocratic suburb of Pittsburgh, numbers dozens of fond motorists among its citizens. Trips to the mountain resorts are made by automobile, members of the country clubs speed out to their club, golf girls gleefully drive the machines to the links, and the business man of the suburbs 10 miles or more from the city daily comes into town in his car instead of taking the tedious street car, the stuffy train, or subjecting himself to a dusty or muddy drive behind his own horse. Country towns are also contributing largely to the ranks of automobile buyers and city dealers are wisely catering to this class of trade. Usually the machines wanted in these places are substantial cars that can be bought at from \$650 to \$1,000. Last year towns within a radius of 40 miles of Pittsburgh ordered over thirty such cars from local dealers, and this spring this number of orders was booked before May 1.

The growth of the automobile sport in Pittsburgh is largely due to the enthusiastic and orderly work of the Automobile Club of Pittsburgh. Aside from interesting hundreds of wealthy men and women in the sport the club has endeavored in every way to throw around automobilism such restrictions as would make it justly popular from its safety. Reckless driving has been condemned in every case. The club has worked in harmony with the city authorities to get suitable regulations passed and has labored, often unsuccessfully, to secure better street and country roads. The city limit of speed is now 8 miles an hour, with a limit of 20 miles an hour without the city and 10 miles an hour on sharp curves. Dozens of the club members have taken long vacation trips together with their friends in automobiles and have thus made the machine the favorite way of getting to the coveted rest spot. This summer several parties are already planning to visit the exposition at St. Louis in this manner and one party is preparing to make the trip by water in a motor boat. The events of the

club last year were among the most popular in the season. The club races at Brunots island drew thousands of spectators, and its events on the boulevards lined these beautiful thoroughfares with sightseers.

The club now has 200 members. Its officers are: President, George Flinn; first vice-president and attorney, James Francis Burke; second vice-president, W. C. Temple; third vice-president, D. Herbert Hostetter; secretary, W. Sanford Smith; treasurer, Reuben Miller, Jr. Among other prominent club workers are: Thomas Reed Hartley, Reado W. Bailey, Robert Pitcairn, Jr., Dr. P. J. Eaton, E. M. Byers, George L. Hailman, H. W. Urfing, A. R. Neeb, Dr. John A. Hawkins and W. L. Elkins. Last year the club bought a fine property at Hamm and Beatty streets in the east end and is now having erected a model three-story club house and garage. It will be in the midst of the largest automobile establishments in the city and where most of the club members can reach it from their homes by the boulevards or best residence streets in 15 minutes. Handsome club rooms, rooms for ladies, bath rooms, etc., and a library and smoking room are among the conveniences assured.

In addition to the regular automobile club there is a Pittsburgh consulate of the American Motor League. It has a large membership and commodious club rooms at Highland and Center avenues, east end. The consulate is directing its every effort this year to getting better roads and streets, enforcing street ordinances, reducing bridge and road tolls and getting guide boards erected in dangerous places and at street intersections.

### BIG BUFFALO PARADE

Buffalo, N. Y., May 9.—The first run of the Buffalo Automobile Club for the season took place Saturday afternoon. The cars lined up at the city hall at 3 o'clock. There were twenty-eight cars in line, twice as many as attended any run last year. Mayor Knight, who expected to take part, was unable to do so on account of pressure of business, but the remainder of the leading lights were found in various touring cars along the line. The committee in charge was J. B. Eccleston, Dr. Parker A. Poole and D. H. Lewis. There was one or more cars of nearly every make sold in Buffalo, and the dealers made every effort to make as good a showing as possible. The route of the parade was from the city hall to Niagara street, thence to Delaware avenue, to Chapin parkway, to the Lahrn parkway, around the Delaware park meadow to the Humboldt parkway, to Main street, to the Terrace, to Franklin street, and to the city hall, where the parade disbanded, and the run afterwards to Depew was a go-as-you-please affair. Depew Inn was very much congested with automobilists. General Hull, superintendent of police; Commissioners Doherty and Rupp, and Senator Hill were under the special care of W. H. Hotchkiss, president of the club. Dinner was served shortly after 6 and by 8 o'clock the last car was on its way back to Buffalo. There is some talk of having the next run to Toronto, but at the present time American drivers going into Canada must deposit 25 per cent of the value of their cars or file a bond that the machine will be returned to this side, and for this reason trips into Canada have been few. The Buffalo club will communicate with the Toronto club and endeavor to arrange the matter.

## SENSIBLE SPEED LIMIT

### Californians Contend That Conditions Should Govern—"Reasonable and Proper" Will Do

Los Angeles, Cal., May 7.—During the state convention of supervisors the Automobile Club of Southern California took the members of the convention as invited guests on a run from Los Angeles to Pomona and back. There were thirty-seven cars in the party when they started, but several met with mishaps during the excursion.

When lunch time had made itself felt, 150 people took seats in the dining rooms of the Hotel Palomares, and several speeches were made. Dr. Millbank Johnson, president of the club, spoke about good roads; A. P. Fleming, in his address concerning state legislation, created much enthusiasm by some logical remarks. He said that city councils and boards of supervisors were all wrong when they attempted to prescribe speed limits, and that was one of the chief reasons why the Automobile Club of Southern California had invited the members of the supervisors' convention for this automobile ride. "An automobile law is needed which would state that no person driving or in charge of an automobile should drive at a greater speed at any time than was reasonable and proper. This would cover all the ground and would make it a question of fact as to whether a rate of speed was proper. It would be easier to determine whether it was improper than to state positively if a machine was going faster than a stated rate."

Mr. Fleming also contended that it would be unreasonable to require an automobile to go as slow as a horse or a street car. A certain speed might be quite adequate for one and not at all for the other. Then, too, the conditions of the roads should be taken into consideration, and even with a speed permitted by law it may be found necessary either to go slower or faster. It was very much a matter of the natural conditions of the man driving the machine, rather than a question of formality and regulation.

In concluding the address the secretary of the club urged the members of the convention to procure a uniform state law, which should be framed with the assistance of men who knew something about automobiles, which would tend to make it a good law.

### BOSTON PLANS RACE MEET

Boston, May 9.—The race committee of the Massachusetts Automobile Club has determined upon a list of seven events for its tournament at Readville May 30, with which it hopes to entice the best men in the automobile world to Boston. In addition it is proposed to add one or two special events. It had been hoped to bring about a meeting between Bowden and Stevens, but owing to the latter's objection to track work, that is impossible. The committee is now working on a match between Bowden and Hills. The former is willing and the latter, who tied Bowden for hill climbing records on Patriot's day, is undecided, owing to certain matters now under consideration. The events scheduled are as follows:

Five miles, open to gasoline touring cars not exceeding 24 horsepower, cars to be raced in full touring form and not stripped; first prize, \$100 in plate; second, \$50 in plate.

Five miles, streamer class; first prize, \$100; second, \$50, cash or plate.

Ten miles, open to all classes and all motive power, no restrictions; first prize, \$250; second, \$150, cash or plate.

Five miles, open to all members of recognized automobile clubs in New England; no restrictions as to weight or motive power, but cars are restricted to 30 horsepower or less; first prize, \$100; second, \$50 in plate.

Five miles, class A, gasoline vehicles between 1,433 and 2,205 pounds; first prize, \$100; second, \$50 in cash or plate.

Five miles, class B, gasoline cars between 818 and 1,433 pounds; first prize, \$100; second, \$50 in cash or plate.

Winners' race, open to all winners of previous events; first prize, \$100; second \$50 in cash or plate.

The Massachusetts Automobile Club has finally determined to hold a monster automobile parade in this city on the afternoon of May 28, just 2 days prior to its race meet, with a view of bringing the largest number of automobiles that has ever been assembled here, and also to emphasize to the public that the automobile is not the death-dealing vehicle that many suppose. Every style of machine will be taken care of in the parade, the divisions in which will be as follows: Foreign touring cars, of which Harlan W. Whipple, president of the American Automobile Association, will be invited to accept the marshaling; foreign runabouts, which will be in charge of Frank R. Peabody, vice-president of the automobile club; American touring cars, under the charge of L. R. Speare, of Newton, Mass.; American runabouts, in charge of H. B. Howard; steam touring cars, under the leadership of George R. Alley; steam runabouts, in charge of Louis S. Ross; racing divisions, in charge of H. L. Bowden; electric vehicles under supervision of George B. McQueen; trade division, in charge of Harry Foadick. Several hundred cars are expected to take part.

### SCHOOL A SUCCESS

Providence, R. I., May 7.—The automobile school in this city, which was managed by the Y. M. C. A., has recently finished its course of instruction, and as this was the first time that the school has been installed here and also as it was the third school of its kind in the country, the results of the instruction have been awaited with a great deal of interest. There were seventy-four students registered, all of whom were in the gasoline class, there not being sufficient applications in the steam and electric classes to warrant instruction along those lines. On four different Monday evenings lectures were given, illustrated by lantern slides, by Parker H. Kemble, of Boston, and there were seven shop talks given by Dr. W. E. Decker, which were illustrated by drawings, sketches, models, and an actual machine, which was moved into the hall for the purpose of illustration. Three different garages were visited by members of the class on three different evenings, when practical work was illustrated as it could not be in the class room.

After the course was finished an examination was given by Dr. Decker, which was taken by forty of the students, and the marks were so hard and the standard so high that only fifteen passed it successfully. The reason for this large number of failures was given as the fear on the part of the instructors that incompetent men might go out from the school with diplomas and would afterwards fail to make good as efficient repair men and chauffeurs. The average attendance was sixty-eight. It is the intention of the officials of the school to give another course, which will be similar to the one just finished.

# NEW YORK BILL IS SIGNED

## Governor Odell's Signature Makes the Hill-Cocks Measure a Law— Provisions of the Bill as to Registration, Speed, Penalties, Etc. —Some Good and Some Bad Points To Be Found

Albany, N. Y., May 6.—On Tuesday of this week Governor Odell attached his signature to the Hill-Cocks bill, thus making the measure a law in this state and doing away with all previous legislation regarding and firmly establishing and defining the rights of automobiles on the New York state highways.

For the next 30 days the secretary of state will be kept busy receiving applications for registration and in issuing the necessary certificates.

In the matter of registration, the bill provides that owners of vehicles must return their present certificate to the secretary of state with \$1 fee, and receive a registration seal with the old number thereon. Those not previously registered must make application and pay a fee of \$2. Chauffeurs are required to file a new application and pay a fee of \$1 if previously registered and \$2 if not previously registered. A badge furnished by the secretary of state must then be displayed always. Manufacturers and dealers are only required to register style of vehicle.

The number of the vehicle registered must be displayed on a plaque on the back of the vehicles as heretofore, numbers "to be in Arabic numerals, black on white ground," not less than 3 inches in height and each stroke not less than 1/2 inch wide, and in addition the letters "N. Y.," not less than 1 inch in height, black on white ground; this, in addition to affixing to the vehicle the small registration seal furnished by the secretary of state. The registered number of the vehicle must also be displayed on the two front lamps "in separate Arabic numerals not less than 1 inch in height and each stroke to be not less than 1/2 inch in width."

Non-resident owners need not register, if registered under the laws of the state of their residence, provided their number is displayed on the back of the vehicle substantially as provided by the New York law, and such number shows the initial of the state in which the vehicle is registered.

In the matter of speed, 20 miles an hour is

permitted in the open country; in cities and villages where the structures at the point in question are not devoted to business or where the dwelling houses for a quarter of a mile average less than 100 feet apart, 15 miles an hour is allowed, and elsewhere, in cities and villages, 10 miles an hour, except at crossings of streets and highways, where speed must not be greater "than is reasonable and proper, having regard to the traffic then on such highway and the safety of the public." On approaching and traversing "a bridge, dam, sharp curve or steep descent," speed must be reduced to 4 miles an hour.

Where the local authorities of unincorporated hamlets shall put up signs having the words "Slow down to 10 miles" and an arrow pointing in the direction where speed must be reduced, speed must be reduced to that rate per hour for not more than 1 mile, but signs cannot lawfully be put up, or if put up need not be regarded, unless restricted territory includes a postoffice and the houses for a quarter of a mile on each side of the postoffice average less than 100 feet apart.

The local authorities of cities and villages may prescribe local ordinances regulating speed, provided that villages cannot make the rate less than 10 miles per hour or cities less than that permitted to other vehicles; or enforce the same unless they shall put up signs indicating the rate, with arrows pointing in the direction where speed must be reduced, at every point at which a main highway crosses the city or village line and within such city or village wherever the rate changes. Nor can they make the penalties for violation of such ordinances greater or different for motor vehicles than for any other vehicles.

Park commissioners may prescribe rates of speed for the territory within their control if they shall also put up signs, with arrows, etc., at each entrance of a park or parkway and along the parkways, indicating the speed permitted.

At request or "on signal by putting up the hand from a person riding, leading or driving

a restive horse or horses or other draft animal," the vehicle must be brought to a stop, if both are traveling in the opposite direction, and be kept stationary until the horse or other animal shall have had reasonable opportunity to pass; in passing such horse or animal going in the same direction, the driver of the motor vehicle must stop and "use reasonable caution in thereafter passing such horse or animal." Only in case "such horse or animal appears badly frightened" or a request is made to stop the motor, need that be done.

In case of accident, the driver of the motor vehicle must stop, upon request, give the name and address of the owner of the vehicle.

Failure to display a number, use of a fictitious seal or number, or, if a chauffeur, failure to register or wear a badge or the wearing of a fictitious badge, or a violation of the speed regulations, or failure to stop on signal, etc., is a misdemeanor, punishable, for the first offense, by a fine of not more than \$100; for a second, by a fine of not less than \$50 nor more than \$100, or imprisonment not exceeding 30 days, or both; for a third, by a fine of not less than \$100 nor more than \$250 and imprisonment not exceeding 30 days.

Failure to register, if an owner, or the violation of any of the rules of the road, etc., may be punished by a fine not exceeding \$25 for the first offense, of not less than \$25 nor more than \$50 for the second offense, and of not less than \$50 nor more than \$100, or imprisonment not exceeding 10 days, or both, for a third offense.

An owner taken into custody for violating any provisions of the law must be taken before the most accessible magistrate and given an immediate hearing, or, if that is not possible must be released on depositing with the officer arresting him or the officer before whom he is taken cash bail in the amount of the maximum fine for the offense with which he is charged, or by leaving the motor vehicle which he is

### AFTER SYRACUSE SCORCHERS

Syracuse, N. Y., May 9.—Residents of South Geddes street, between Delaware and West Onondaga streets, are aroused over the use of the Geddes street hill by automobile drivers for testing purposes. They have made complaint to the city authorities and are preparing to take further action to insure the safety of those who have occasion to use the street. Interested residents have measured the distance



STAND AT ONE OF THE CONTROLS

FRENCH MOTOR CYCLE TEST

FULLON AND HIS BIKER

between Delaware and Onondaga streets and found an automobile, with the result that they found it to be going a little faster than the law allows. The occasion of the latest activity is the receipt of a circular letter from an automobile making concern which instantaneously aroused their ire. The letter referred to a complaint which had been made at the city hall and declared it was a necessity for the company to use Geddes street, on which its plant is located, for testing purposes. This letter will be presented to Commissioner of Public Safety Bowen to substantiate the claim that the street is used for automobile testing and a demand that he enforce the 8-mile an hour speed ordinance.

#### TRAPPING SLEDDY MOTORISTS

Hartford, Conn., May 9—A trap to catch away and speeding automobilists has been revived in the town of West Hartford by Constable Strong, a bewiskered, much-uniformed, tin-starred cop who is charged by the automobilists of the county who have been taken in with a greater regard for the fees he and the justice of the peace rake off out of the arrests than he has appreciation of a duty to be performed. Louis P. Strong, driving a Cadillac, was taken in in a bunch, and was held up by the constable who flashed his tin badge of office, an enormous star, and then told the driver, after learning his name and address and taking his number, that he would serve warrants on him later in the week.

Because of the peculiar location of the trap, which is at the foot of a long hill, and with no houses or cross roads, it is considered a rank injustice by the motorists of the county and efforts are being brought to bear to get the constable's buttons at the next election. Another trap has been located in the town of Berlin, but there is more justice in this one, since automobilists have been giving to speeding cars through the fine roads of the town, to the possible danger of many residents and school children.

#### HAS NO USE FOR TRAINS

Syracuse, N. Y., May 10—F. E. Moskovics, bound from New York to St. Louis in an automobile, left Syracuse at 6:45 o'clock last night for Rochester. Mr. Moskovics is traveling in a 15-horsepower car and is attempting to prove that it is easier to adhere to a schedule calling for a high rate of speed in traveling in an automobile than by trains. His determination is to prove that up-to-date touring cars furnish as reliable a mode of transportation as the best trains and he expressed himself as highly pleased when seen at the Yates hotel last night in having lived up to his schedule in making the trip from New York to Syracuse.

"I want to demonstrate," said Mr. Moskovics, "that people in a position to own touring cars will be independent of the railroads. A reliable and far more enjoyable means of travel is furnished by the automobile."

Like other tourists who have come up the state, Mr. Moskovics complained of the condition of the roads. "They are the worst I have ever seen," he declared, "especially between Hudson and Syracuse. I have traveled over roads in Italy, Austria, France, and in fact nearly all of the European countries, and the contrast between their roads and those of the Empire state of the United States is something remarkable. It is very surprising how few roads in this state have been so neglected."

## MOTOR CYCLE TEST ENDS

### French Two-Wheelers Have Hard Struggle Over Somewhat Bad Roads for Three Full Days

Paris, April 28—The motor cycle endurance run is ended and everybody connected with the trial is pleased. It was a severe test, not only for the machines, but for the drivers and officials, and the results are expected to be far reaching. At present the officials of the test are busy preparing their report, which will probably be full of figures and other valuable information for the manufacturer.

Of the fifty-nine starters on the first day, twenty-nine have returned to Paris up to date, and of this number nineteen have been examined officially and accepted for the final account. There are still a number of the small motor-driven bicycles on the way to Paris and it is expected that nearly three-quarters of the total number who started will finish the entire run of 750 miles.

There were very few serious accidents. One of them, however, was unfortunate and resulted in one of the competitors breaking his arm. During part of the long journey the weather was fine, while during other stages it rained so hard that some of the roads were rivers of slush. The efficiency of the machines was then thoroughly tested, and as but few had anti-slipping devices the track was the more difficult.

There were forty-eight starters on the second day, when the Tours-Bordeaux stretch was run. The distance between the two cities is 214 miles, and the two Minerva machines driven by Kubling and Oleslagers reached Bordeaux ahead of the others. On the next day, Sunday, all the machines which had reached town were placed on exhibition in Alhambra hall, where several hundred people went to inspect them. The home trip was made in two stretches, to Tours and then on the next day to Paris. The Branon machine, driven by Fonlon, was the first to reach Paris. It was closely followed by Denis, riding a Lurquin-Coudert, Bonnard on a Werner and Knihing on a Minerva.

#### AUGUSTUS AND ROLLIN LUNCHING

Chicago, May 12—Augustus Post and Rollin T. White arrived in Chicago on Monday and remained until yesterday. The object of the eastern visitors was to inspect the roads from Chicago to St. Louis, Mo., and over which the automobile caravan will make its run to the world's fair. The two members of the committee on the St. Louis run were entertained at "lunching" by President Parson of the Chicago Automobile Club yesterday. Mayor Harrison and other notables were among the guests.

#### MAKE UNIFORM STORAGE RATE

The dealers of Columbus, O., recently decided upon a uniform scale of rates concerning the renting, storage of automobiles during the remainder of this year's season.

Last year there was considerable annoyance on account of the difference in the rates of dealers. At first it was thought that competition would prevent the establishing of a general agreement, but the continual complaints finally resulted in a mutual and satisfactory arrangement.

The renting rates are as follows: A five-passenger car for 24 hours, \$20; for 1 hour, \$5; for second hour, \$3. Car seating three persons, \$15 for 24 hours; \$4 for 1 hour and \$2.50 for second hour. Runabouts, \$10 for 24 hours; \$3 for 1 hour, and \$1.50 for second hour.

Garage charges, per month: Five-passenger car, \$15; four-passenger car, \$12; runabouts, \$10; electric vehicles, \$12; tonning cars, dead storage, \$10; runabouts, dead storage, \$8. These are the charges when the automobiles are not delivered, but when they are to be delivered there will be an extra charge of \$3 for each of the four first named vehicles.

The storage on a tonning car one night: in 50 cents and only 25 cents for a run-about.

#### MILWAUKEE OUTDOOR SHOW

Milwaukee, Wis., May 7—An automobile show for Milwaukee. That's the great news of the hour, and those who have heard about it are already excited and as enthusiastic as if the matter is to happen in a week. But after all it does not matter now; we are on the list with Chicago, Boston, New York, Buffalo and others, who all have had their annual exhibition. This show, however, will be different from all the rest, inasmuch as it will be an outdoor affair, where the cars will be seen moving, an advantage which will be appreciated by many. The date has not yet been selected, but the show will be held after the automobile week at St. Louis, Mo., some time in August.

At a meeting between Dr. C. De Garmo Gray, James L. Drought, Theodore Jonas, Dr. Louis Fulmer, U. W. Iverson and R. C. Bates the question was discussed. Dr. Gray reported that the business men of the town were enthusiastic concerning the matter and that no efforts would be spared to make the event a success.

A number of prominent Milwaukee motorists who will take part in the club run to St. Louis will be asked to interest eastern automobile owners in the matter and urge them to make a run to this city. There will be speed trials and amateur races and other competitions during the show week.

#### CENTURY PLANT SOLD

Syracuse, N. Y., May 5—Automobiles were never sold cheaper in Syracuse than they were knocked down by Harold Stone, as trustee in bankruptcy of the Century Motor Vehicle Co., at a bankruptcy sale Saturday morning. Three, ready for use, were sold and together brought only \$705. The plant itself, exclusive of the real estate, brought \$8,350, making the total realized \$9,055. The appraisers' figures on the property sold were \$10,500.

The liabilities amounted to about \$75,000, and it is estimated that the creditors will receive not to exceed 8 per cent of their claims. The purchaser of the plant was H. F. Frevert, of New York city, who immediately transferred it to the Syracuse Supply Co. The latter company this morning opened the shop and will proceed to sell the unfinished automobiles, parts, motors, dynamos, machinery, tools and fixtures.

The sale was conducted at the company's building in East Water street and there were upwards of 125 people in attendance. Trustee Stone first offered the property in parcels and then as a whole. The larger sum being realized on the sale as a whole, that was confirmed by Referee Stone. The Syracuse Supply Co. anticipates a ready sale for the unfinished machines and parts to men who will construct their own cars.



## AFFAIRS OF THE CLUBS



A RUN OF THE AUTOMOBILE CLUB OF SO. PIERCE, CALIFORNIA

Motor bicycle owners in Brockton, Mass., intend forming a motor cycle club.

◆◆◆

The twelve owners of automobiles in Hamilton, O., have decided to form an organization, which will be given the name of Butler County Automobile Club.

◆◆◆

The officers of the Springfield Automobile Club, Springfield, Ill., are: G. Westenberger, president; Edward Holtman, secretary, and Charles Wetterer, treasurer. The club has about forty-five members.

◆◆◆

The annual parade arranged by the Louisville Automobile Club, Louisville, Ky., will be held May 21. All the owners of motor cars in the Kentucky town have been invited to participate in the parade.

◆◆◆

The following officers were elected at the recent election of the Automobile Club of Ossipee, N. H.: President, Earl Stanley; vice-president, Chester Sinclair; secretary, Lisle Moulton; treasurer, Fred Ham.

◆◆◆

At a meeting of owners and prospective owners of automobiles held in Danville, Ill., it was decided to organize an automobile club this week. Twenty-seven persons who were present at the preliminary meeting promised to become members.

◆◆◆

Motorists of New Haven, Conn., met last week and took the first steps towards forming an automobile club. W. T. Dill was named temporary president and F. R. Bowers secretary. A committee consisting of J. H. Martin, Dr. C. S. Lamb and A. Beckman was named to draft a constitution and by-laws. The sixteen automobilists present at the meeting have pledged themselves to become members.

◆◆◆

At a meeting of the Binghamton Automobile Club, Binghamton, N. Y., held May 5, the following members were named directors: W. Sharpe Kilmer, J. M. Davidge, D. A. Smith, M. J. Corbett, C. E. Titchener, G. H. Barlow, F. H. Beach, Harry Bennett, E. E. Kuttell, George F. Johnson and N. M. Pierce. The latter was also named temporary secretary, while J. M. Davidge was named temporary chairman.

At Tuesday's directors' meeting of the Chicago Automobile Club twenty-eight new members were admitted, bringing the membership list past the 300 mark. The house committee reported that the Evanston Boat Club house would be ready within the next 10 days, and that it would be officially inaugurated May 28. Dan Canary's garage at Wabash avenue and Hubbard court will be used for garage purposes by the club in addition to its own, the latter being entirely inadequate, while Canary's place can easily accommodate 150 machines. R. W. Spangler, formerly with Morco AOE, has succeeded E. Ed St. Peter as assistant secretary of the club. Last Saturday's club run to Indiana Harbor, Ind., was the longest attempted this season. About twenty members took part in the run, but only one car completed the entire run. Next Saturday's run of the club will be to the home of President John Farson, at Oak Park, Ill., where the participants in the run will be entertained. Saturday, May 21, the excursion of the club will be to Hotel Mornine, Highland Park, Ill.

◆◆◆

Officers for the ensuing year were elected by the New Jersey Automobile and Motor Club, of Newark, N. J., as follows: President, F. R. Pratt; vice-president, Dr. J. R. English; J. W. Mason, R. M. Shanley, Jr., and G. H. Wood, directors. The club has 150 members and the membership roll is being rapidly increased. The club intends to thoroughly cover the New Jersey roadways with signs at all intersecting points, giving distances and the condition of the roads. A circular letter will be sent to every registered automobilist showing the objects of the club in this work and asking for co-operation. The committee in charge of this work is H. P. Cook, J. H. Dawson, B. M. Stanley, Jr., and J. H. Wood. One of the objects of the club is the enforcement of the law and members who are unjustly arrested or defamed, the club acting as a unit in all things.

◆◆◆

At a recent meeting of the New Bedford Automobile Association, New Bedford, Mass., the following officers were named: President, Richard S. Taber; vice-president, Albert B. Kenyon; secretary, Benjamin C. Tripp; treasurer, Joseph Nicklas. The members of the as-

sociation are principally former members of the automobile club which was formed 3 years ago. The new organization has twenty-one members and it is likely it will join the American Motor League.

◆◆◆

At the annual meeting of the Worcester Automobile Club, Worcester, Mass., the following officers were elected to serve during this year: Asa Goddard, president; B. Austin Coats, vice-president; F. E. Frost, secretary; M. Percival Whitall, treasurer. An automobile race meeting was planned to be held Memorial day.

◆◆◆

The officers of the Cincinnati Automobile Club, Cincinnati, O., who were recently elected, are: Val Duttonhofer, president; G. McMorris, vice-president; Dr. L. S. Cotler, treasurer and secretary; F. F. Bradley, member of the board of governors; Stanley Hooker, captain. The club named the following delegates to the international good roads convention, which is to be held in St. Louis, Mo.: Max Fleischman, Douglas Neare, Frank Zumstein, Jesse Lippen-cott and F. C. Miller.

◆◆◆

At the monthly meeting of the Dayton Automobile Club, Dayton, O., which took place last week, the following club runs for the season were arranged: May 10, to Osborn; May 24, Franklin; June 7, Tippecanoe; June 21, Germantown; June 28, Harrisburg; July 1, Xenia; July 26, Troy; August 9, Middletown; August 23, West Milton; September 6, Bellbrook; September 20, Springfield; October 4, Hamilton; October 18, Piqua; November 1, Cincinnati. Preliminary plans were made for the race which the club intends to give on the Fourth of July. Several well known drivers are likely to be invited for the occasion.

◆◆◆

The scheme proposed by Dr. Julian A. Chase, president of the Rhode Island Automobile Club, which had for its object the installation of a club house to be supported jointly by the Rhode Island Automobile Club and the Massachusetts Automobile Club, has not been allowed to die out, for R. Lincoln Lippitt, chairman of the runs and tours committee of the Rhode Island organization, went out with a party to look over possible sites for such a club. It has been proposed to purchase a farm house on the main road about half way between Boston and Providence, refit it, and use it for the purpose stated. A number of communications on the subject have passed between the two clubs recently.

◆◆◆

It is probable that an arrangement may be effected whereby the Cleveland Automobile Club, of Cleveland, O., may secure the privileges of the Dover Bay Club, a social organization which has a fine house and grounds on the lake shore about 10 miles west of Cleveland, and in return the Cleveland Automobile Club may grant the use of its rooms in the Hollenden hotel to Dover Bay Club members. The plan of an arrangement was proposed at a meeting of the executive board of the automobile club and Charles R. Shanks was named to visit the Dover club and report conditions. Mr. Shanks will make a favorable report. He will not suggest a merger of the two clubs, but the proposition to the Dover club will probably be for an arrangement covering one season.

# Motor Car Family Trees



No 8  
THE  
ST. LOUIS



1904 - Three-cylinder Tonneau  
1904 - Single-cylinder Tonneau  
1899 - Runabout  
1901 - Tonneau

1903 - 3rd Runabout  
1906 - Runabout  
1899 - Runabout

1903 - Tonneau  
1901 - Boston Model  
1900 - Runabout  
1897 - The Patriarch

## CADILLAC PLANT GROWS

### Seven New Fire-Proof Buildings Now Being Erected—New and Novel Testing Scheme Is Employed

Detroit, Mich., May 9.—Within a few months the Cadillac Automobile Co. will have one of the finest plants in the automobile industry. All of the buildings that were burned during the recent fire will be replaced by fireproof structures, in which steel, brick and tile will be used to the exclusion of wood. A sprinkler system and a Siamese hose system will be provided, which the officers of the company hope will enable them to have one of the safest factories in the country.

A large force of workmen has been occupied within the last few weeks in clearing away the piles of debris left from the big fire and the good weather has enabled it to make rapid progress.

When the buildings are completed there will be seven, having a total floor space of 275,000 square feet. Besides these new buildings the present machine shop will be reconstructed and also made fireproof, while two stories will be added to the southwest buildings, which had two floors burned out.

At present the company is back in the building located on Cass avenue. In the buildings of the Peninsular Mill Machine Screen Co., the Detroit Curling Club and two floors of William E. Metzger's automobile building, the bodies are being finished. Most of the assembling is done in the warehouses, which are across Cass avenue from the main building. Where the automobiles which were saved from the fire are stored. Twenty-two complete cars are turned out daily, and according to Sales Manager Metzger there will be a steady increase in this number until forty will be finished each day.

A new testing device, invented by Alanson P. Brush, mechanical expert of the company, is said to be the most remarkable invention made in connection with the automobile industry within recent years. The chassis of the finished machine is placed so that the wheels operate on two cylinders attached to pulleys, which operate a large 8-foot blower. This fan is revolved and forces a draft of air through a square-mouthed tube pointing into the radiating system. The faster the machine is run on the drums, the stronger is the current of air. A tachometer is attached to the apparatus and records the exact number of miles run, while a speedometer is affixed for ascertaining the rate of speed.

Another scale device is for the load test and by this can be told exactly what kind of work the machine is doing with any number of persons aboard and for any number of miles. The new mechanical testing department is on the lower floor of the west wing of the building.

#### MOBILE PLANT OCCUPIED

The plant formerly belonging to the Mobile Co. of America, at Tarrytown-on-the-Hudson, near New York city, has passed into the hands of the newly-organized Maxwell-Briscoe Motor Co. This plant, representing an investment of over \$300,000, is equipped in a way that could hardly be improved upon. The Maxwell-Briscoe Motor Co. has a paid-in capital of about half a million, and expects to attain importance in the motor plant and auto-

mobile field. The plant will be medium-priced motor boats and automobiles. Some of the models were built in Detroit last summer. Benjamin Briscoe, formerly of the Briscoe Mfg. Co., will be president of the Maxwell-Briscoe Motor Co., having disposed of his interest in the Briscoe Mfg. Co. J. D. Maxwell, well known in the automobile business, will be the general superintendent and technical man. Mr. Maxwell has been associated with several cars and companies. The company now has a force of men at work, and will have its product on the market during the coming summer.

#### RECENT INCORPORATIONS

Brooklyn, N. Y.—The Charles Seffrin Motor Carriage Co., capital \$30,000. Organized by Charles, Adolph and Annie Seffrin.

Burlington, N. J.—Burlington Automobile Co. P. Kearns, chairman; Ernest Watts, secretary; George Allison, treasurer.

Brooklyn, N. Y.—Belford Automobile Co., capital \$5,000. Directors, George Shields, T. P. C. Forbes and Jessie C. Forbes.

Milwaukee, Wis.—The Western Auto Supply Co., capital \$25,000. Incorporators, William M. Graham, Winfield S. Grant and Joseph B. Conrad.

Rochester, N. Y.—Trebort Automobile and Marine Motor Co., capital \$25,000. Directors, Henry Trebort, Sr., A. P. Schwab and Catherine Schwab.

Indianapolis, Ind.—Gibson-Short Cycle and Automobile Co. W. H. Brown, president; E. E. Short, secretary and treasurer; Cecil E. Gibson, general manager.

Newark, N. J.—Elberon Automobile Co., capital \$10,000. Incorporators, Hugo Elberon, of Elberon; George A. Breeze and Joseph V. Weber, of Newark.

Nashville, Tenn.—Southern Electrical Supply Co., capital \$20,000. Incorporators, Felix Schwab, W. K. Webb, F. O. Watts, W. O. Vertrees and W. M. Bowles.

#### THE PEERLESS AT THE HUB

A. E. Morrison, New England manager of the Peerless Motor Car Co., is delighted in now possessing one of the best up-to-date garages to be found in Boston, a garage which means much for the continued welfare of his trade, and of no small amount of importance to the Peerless men. This garage is one story in height, having been built especially for the company on plans and specifications approved by Mr. Morrison. It is situated on Ferdinand street, within speaking distance of the salesroom on Columbus avenue, and is entirely up to date in every particular. Although being but one story above the street level the building really has two floors, the basement, so called, being open in the rear and affording plenty of light for the workmen. The repair department is situated there, while ample opportunity is given for the storage of machines. On the street floor the room is 50 by 100 feet, free from posts, so that no trouble need be anticipated from moving machines. An office is located between the two main entrances to the garage, while locker room for the benefit of the patrons is large and ample, and the ladies' room is fitted up with all the conveniences so dear to the feminine heart. The garage will be open day and night, and since its opening seems to have jumped into popular favor.

## SCHOOL FOR CLEVELAND

### Young Men's Christian Association to Take Up Automobile Instruction in an Extensive Way

Cleveland, O., May 9.—Beginning May 10 the educational department of the Young Men's Christian Association will offer a course in automobile instruction. The increase in the manufacture and use of motor vehicles in Cleveland has created a demand for a new line of mechanical knowledge pertaining to the subject. It is valuable to the hundreds of owners of automobiles to understand the principles of construction and operation of their machines. Young men with this knowledge are in demand as chauffeurs. The policy of the association's educational department has always been to furnish such courses of instruction as are of the most practical and direct benefit to members. The establishment of this course is simply a furtherance of this same policy.

The novelty of such a course will prompt many to inquire how such a subject will be taught. It will be somewhat different from the ordinary classes of instruction of the association. Lectures will form the backbone of the course. Supplementing these will be illustrations with gas engines, sectional views of machines, transmission gears, steering gears, charts and drawings. In addition to this, it is expected to give several demonstrations with different makes and types of cars complete.

The instruction will be in charge of George Case, of the Case School of Applied Science. Mr. Case is strongly recommended by the mechanical department of his school and was chosen from among several automobile men in town as the most practical and best fitted to teach. He has made an extensive study of automobiles, both from a technical and a practical point of view, and is thoroughly familiar with the various types of machines and principles of automobile construction and use.

The various automobile manufacturing companies of Cleveland have expressed a very friendly spirit towards the enterprise. The apparatus to be used in the instruction has been secured from local companies and those represented here. Through the courtesy of the Olds company of Detroit, the class will have the use of the sectional Olds car which was displayed at the various automobile shows last winter. Another machine similarly arranged for demonstration purposes, but representing another type, has been promised by the Toledo company. Other parts have been loaned by Cleveland companies and apparatus is available which will represent completely all the various types of automobiles. The class is open to outsiders as well as to association members.

#### CURRENT MISCELLANY

There has been completed at the factory of the Electric Vehicle Co., of Hartford, Conn., what is believed to be one of the largest automobiles ever built. This giant car, because of its shape, has been termed "The Whale," and it has a capacity of 56 passengers. The big car is being built for Blanke's coffee for advertising purposes and will shortly be shipped to St. Louis, where it

is to be used for sight-seeing purposes at the exposition. The Whale has a radius of 40 miles and will attain a speed with its complement of passengers of about 12 miles an hour. The car is driven with four motors, one attached to each wheel, and in addition there is a motor to aid the helmsman in steering the car. The seats and body protrude over the rear and front axles and the car is so wide that eight persons can sit comfortably on each one of the cross seats. The painting is particularly ornate and the body is in a variety of Scotch plaids.

The final meeting of the creditors of the I. A. Weston Co., of Syracuse, N. Y., which manufactured gears and automobile accessories, resulted in the filing of objections to a large number of claims before Referee in Bankruptcy Charles L. Stone Monday. One additional bunch of bank claims aggregating \$10,000 was put in and the referee declared that it was not right to hold off claims so long, necessitating the trustee making his accounts all over. This came up with a motion for allowances and was held.

Alderman Walrath, of Evanston, Ill., told the board of directors of the Chicago Automobile Club, Tuesday, that he would introduce an ordinance at next week's meeting of the Evanston board of aldermen, changing the speed limit to 12 miles an hour. He said that it was quite likely the proposition would meet with the approval of his colleagues. The president of Winnetka intends to introduce a similar proposition in his village.

The Michigan Automobile Co., of Kalamazoo, Mich., will soon have on the market a car of the removable tonneau variety. The motor is of the opposed type, 4-5-8 by 5-inch and rated at 12 horsepower. The wheel base is 74 inches, sufficient to provide a roomy tonneau. The design of the car is the joint product of General Manager Fuller and Superintendent Russell.

A Scotch automobile concern has recently shipped a number of double-decked motor buses to Fremantle, Western Australia. The vehicles have accommodation for fourteen passengers inside and sixteen outside. With a 24-horsepower motor the car develops a speed of twelve miles per hour.

Is its official report the Society of Motor Manufacturers and Traders of Great Britain states that 165,000 people visited the Crystal Palace show last February. The attendance was 45,000 more than last year.

An Oldsmobile was recently driven from Hantsdon to London, England, in 10 hours 53 minutes actual running time, the distance between the two localities being 235 miles, making an average of more than 21 miles per hour.

## LOOKING OVER THE ROUTE

Cleveland, May 9.—Next Sunday George S. Waite, who is in charge of this division of the St. Louis exposition tours, together with E. Shriver Reese, George Collier and W. F. Sayle, of the Cleveland Automobile Club, will take a run to South Bend, Ind., to look over the course, select meal places and arrange for supplies of fuel and for repair work. Mr. Waite will prepare a careful description of all the interesting points along the route, which will be embodied in the guide book supplied to those that participate in the tour. At present the roads in this section are in pretty fair shape.

## N. A. A. M. CONSTITUTION

### Newly Incorporated Body Meets and Adopts Constitution and By-Laws for Its Guidance

The constitution of the National Association of Automobile Manufacturers, Inc., as adopted at the meeting last week is as follows:

#### ARTICLE I.—NAME

Section 1. The name of this corporation shall be the National Association of Automobile Manufacturers, Incorporated.

#### ARTICLE II.—OBJECTS

Section 1. The objects of this association shall be to protect, promote, further and advance the interests of the members, as manufacturers and sellers of automobiles and all other self-propelling vehicles of every kind and description, and of the various parts of automobiles, or accessories thereto, and as journalists devoted in all or in part to the interests of the automobile, self-propelling vehicles and allied and kindred industries.

#### ARTICLE III.—MEMBERSHIP

Section 1. The membership shall consist of two classes: active and associate.

Section 2. Any person, and the representative of any partnership or corporation, in good standing, and engaged in the manufacture of automobiles in the United States shall be eligible to active membership.

Section 3. Any person, and the representative of any partnership or corporation, in good standing, engaged in the United States in the manufacture of parts of automobiles or accessories thereto, or in the sale thereof, or in the sale of automobiles, and the representative of any journal devoted in whole or in part to the interest of the automobile or allied industries, shall be eligible to associate membership.

Section 4. Whether any particular application for membership in the association is in "good standing" shall be determined absolutely by a majority vote of the members of the executive committee present at any meeting at which said question may arise; but no member shall in any event be considered in good standing who may be in default for any dues.

#### ARTICLE IV.—GOVERNMENT

Section 1. The officers of the association shall be a president, first, second and third vice presidents, a treasurer and an executive committee, fifteen in number. There may or may not be a secretary appointed or elected by a majority vote of the executive committee and such secretary may or may not be a member of the corporation.

The most important articles of the by-laws are as follows:

#### ARTICLE I.—GOVERNMENT

Section 1. The management and control of the affairs and funds of the association shall be vested in an executive committee, fifteen in number.

#### ARTICLE II.—MEETINGS

Section 1. The annual meeting shall be held in the city of New York on such date as shall be determined by the executive committee. Notice of the time and place of such meetings shall be mailed to each member, 30 days before each such meeting.

Section 2. Special meetings of the association may be held upon a call signed by a majority of the executive committee or by ten active members in good standing and not less than 10 days after the issuance of a notice of any such call, and such notice shall state the purpose of the meeting.

Section 3. At all meetings of the association, fifteen active members shall constitute a quorum.

Section 4. Members may be represented at all members' meeting in person or by proxy, but no individual shall be permitted to represent and vote more than one membership.

#### ARTICLE IV.—MEMBERSHIP

Section 1. The incorporators of the association may elect to membership by an affirmative vote of at least two-thirds thereof such of the members of the old unincorporated National Association of Automobile Manufacturers as have signified in writing their assent to the creation of the new incorporated association and the transfer of the effects and assets of the said national association to the new corporation, or who shall file with the

new association a similar consent, within 15 days after notice to them that they are required so to do.

Section 2. Applications for membership by others than those who may be elected in pursuance of the foregoing section must be made in due form, addressed to the association, signed by the applicant, and endorsed with the approval of at least two then active members in good standing.

Section 3. The affirmative vote of at least two-thirds of the executive committee shall be necessary for an election to membership. No candidate so elected shall be deemed to have become a member of the association until he shall have qualified by paying to the treasurer, within 30 days after notice of his election, the membership fees and dues for the then current year; upon the candidate's failure to so qualify within the time limited herein, his election shall be considered to be annulled thereby unless the executive committee by two-thirds vote shall extend the time within which he may qualify for particular cause shown.

Section 4. Every member and corporation or partnership whose representative is a member shall within 30 days of the receipt by him of notice of his election and before he shall exercise any of the rights or privileges of membership, subscribe the constitution and by-laws of the association.

Section 5. The membership shall be for active members \$25; for associate members \$10; and the annual dues thereafter shall be for active members \$10 and for associate members \$5. The dues shall be payable to the treasurer annually upon the first day of January in each and every year.

Section 6. Any member who neglects to pay his annual dues as provided in the foregoing section and who shall remain in default for 90 days after due notice that his dues remain unpaid and that he stands in danger of the forfeiture provided in this section shall be deemed to have forfeited his membership, and such member can only be reinstated by a majority vote of the executive committee, and after full settlement of delinquent dues.

#### ARTICLE VIII.—PRIVILEGES

Section 1. Every active member in good standing shall be eligible to the executive committee and to any office and any committee.

Section 2. Association members shall be entitled to all privileges of the association and shall conform to its constitution and by-laws and rules but shall not have the right to hold office or vote.

#### ARTICLE IX.—ANNUAL CONVENTION

Section 1. Once in each year, at such time and place as may be determined by the executive committee, there may be held a meeting or convention, of active and associate members of this association, at which discussions shall be held and papers read on topics of general interest to this association.

## STEAMERS SELL WELL

The most important development in the automobile trade in Providence, R. I., was the incorporation of the Central Automobile Exchange. The exchange last year had the agency for the Stanley and White, and was successful. This year it placed an order with the Stanley people for 500 machines, planning to sell them all over New England and perhaps in New York. The officers are: President, L. F. N. Baldwin; vice-president, B. L. Blackinton; secretary and treasurer, Gilbert M. King. The capital stock is \$25,000, which is all paid in. The present headquarters will be enlarged. An order for 200 additional Stanley cars has been placed, and agencies will be established, in Fall River, Mass.; Hartford, Conn., and New York.

## TARIFF LOW IN INDIA

Under the new tariff act of British India, motor cars are subject to an import duty of 5 per cent ad valorem, with the exception of those designed to carry goods and containing a prime mover, which are free of duty. The low rate of duty is destined to promote the industry in India.



## Gossip of the Garages

W. Gould Brokaw, of the A. C. A. racing committee, who had a car in the Ormond races, has just ordered a 24-30 Fiat from Hollander & Tange-man, of New York. It is to be especially built for him at the Turin factory, and will be finished entirely in white. The carriage will be built of white Cape Cod wood, and it will be upholstered with white enameled leather. His brother, Clifford Brokaw, purchased a Fiat about a month ago. During the past 3 weeks Hollander & Tange-man have sold twelve of these cars, representing a total cost of over \$100,000. G. P. Tange-man, who is to sail May 24, will have a Fiat awaiting him in Paris for a run to Homburg for the cup race.

Since L. Lawrence, of Newark, N. J., announced his detachable upholstery for aluminum bodies enabling the owner to take out the upholstered backings and sides in event of an indentation being made in the body or in event of any sort of an accident, he has had a number of inquiries and his business promises to grow. The development of the idea promises to become general. The upholstery is done on frames which fit perfectly into the body instead of being done on the body itself, necessitating its taking apart to effect a repair.

President Winsor T. White, of the White Sewing Machine Co., was in Boston last week and spent the entire day in company with Manager George Lowe, looking over sites for the construction of a White garage. The necessity for such a garage has been apparent for over a year and it now looks as though the matter will be brought to an immediate focus and that within a month or so. Two sites are now being considered, one in the Back bay district and the other on Berkeley street, near the Locomobile establishment.

The Phelps, a new car in the New York field, is making its way rapidly into the realms of popularity. The Phelps Motor Vehicle Co., at 154 West Thirty-eighth street, was fortunate enough to secure a location in the heart of the automobile district and the attractiveness of the car in competition with others has given it popularity. The Phelps gained a good name by winning performances in Eagle Rock contests of 1903.

One of the most progressive of the Boston managers is E. A. Gilmore, of the Rambler, who has this season disposed of as many machines as any other agent or dealer in this city. His stock of Rammers has dwindled down considerably, and the only thing he is not able to do is to smooth down the army of angry men awaiting deliveries of the cars ordered.

Automobile delivery wagons are growing rapidly in popularity in Newark, N. J., and the horse is being forced to give way to modern inventions. One of the recent purchasers of a delivery wagon was H. E. Bird, who purchased a Cadillac delivery wagon from the Motor Car Co., of New Jersey. Mr. Bird will use this wagon for cigar delivery purposes in Newark

and the Oranges, replacing several horses in the work.

A carload of Yales has done a little to relieve the pressure at the Pioneer Automobile Co., of New York.

W. H. Kirkpatrick, who is making a tour of Peerless agencies and branches, was in New York last week.

Baron F. de Durckheim, who went to St. Louis to install the de Dietrich exhibit, has returned to New York.

Sales Manager Martin, of the Cadillac Co., of New York, has gone to Coniaville to recuperate from a recent attack of appendicitis.

George H. Day, Charles Clifton, E. H. Culter and L. T. Davis, Jr., were a notable quartette at Clason Point Inn, New York, on a recent evening.

E. B. Gallinger is showing at the New York garage, 140 West Thirty-eighth street, a 55-horsepower Georges Richard-Brazier car of attractive appearance.

The special igniter, which the Banker Bros. Co. is introducing to automobilists at large is a part of the regular equipment of the Pierce and Peerless cars.

During the last week the Eldredge runabout made its appearance in Newark, N. J., the Newark Automobile Co., being the agent. Manager Hood has been kept constantly employed giving demonstrations.

The Duerr-Ward Co., New York, received the first of the four-cylinder Royal Tourists last week and on the strength of its impressive appearance and satisfactory demonstration has already taken six orders for them.

Paul T. Deming, New York representative of the White Sewing Machine Co., has returned from a 3 months' honeymoon tour in southern Europe in the touring car that won for him a gold medal in the Pittsburgh run.

One of the busiest demonstrating cars in Gotham is the 1904 Olds tonneau, which is regarded as one of the "cutest little things on wheels." General Eckert, manager of the Postal Telegraph Co., was one of the first buyers.

"Birdie" Munger has joined with G. W. Moore and formed the Moore & Munger Co., to manufacture bodies, tops, fenders and all accessories. A four-story factory has been established at 602-604 West Fifty-second street, New York.

H. H. Rice, who has been the Providence, R. I., representative of the Pope Mfg. Co., for some years, has been transferred to the Waverley factory at Indianapolis,

Ind., and with a very few days' notice he gave up his place and went to accept his new position. In addition to having full charge of all of the Providence business of the Pope company, Mr. Rice was the secretary of the Rhode Island Automobile Club and was one of the most active officials on the board of directors. W. J. Fox, who has been the representative of the Pope company in Washington, D. C., is Mr. Rice's successor.

Since moving into new quarters the Motor Car Co., of New Jersey, has been busy selling Cadillac cars. One carload received during the week was cleaned out and two more will arrive within a few days. C. S. Calvert, of the Motor Car Co., and W. H. Kirkpatrick, of the Peerless Co., have made several trips through the state and in these trips disposed of a number of Peerless cars.

The agency for two new cars has been taken for the Providence, R. I., district. The Shepard Co., which controls one of the largest department stores in that city, will sell the Emerson car, made in Pawtucket, and the George Richard-Brazier. John Shepard, Jr., has had one of the \$7,000 Braziers for a number of weeks.

The first lot of Smith & Mabley motor boats will be in the water by the end of the month. Delivery of Simplex automobiles will begin the middle of June. The company has established in addition to its regular Panhard and Renault lines a Mercedes connection that is adding a considerable factor to its importations.

George W. Condon, of Newark, N. J., has secured the agency for Minerva, a French car, and will receive a car shortly. The Minerva is constructed in several styles, one, two, three and four cylinders, and ranging in price up to \$15,000. The power varies according to the model, from 8 to 90 horsepower.

C. F. Nagle, who for a great number of years had charge of the private garage of Dr. Parker, one of the members of the summer colony on the North Shore, Boston, has at will shortly embark in the automobile trade. He is now negotiating for the securing of the Fiat agency in Boston.

Regular shipments of Deauville to meet orders already placed continue with satisfactory monotony at the Standard Automobile Co., of New York. The evidences of one of the biggest importing businesses in town are indisputable at this garage.

When an automobile breaks down in Newark, N. J., nowadays the emergency car maintained by the Newark Automobile Co. is immediately called. Sunday four calls were received from the neighborhood of the North Newark station.

John A. Kingman, who was in New York Saturday, reports the most satisfactory season as regards sales and deliveries in the recent history of the Locomobile company.



# THE READERS' CLEARING HOUSE

## WORN ENGINE BEARINGS

Wapkometa, O.—Editor *MOTOR AGE*—I have a 4-horsepower motor, of the French high speed variety. After running 1,000 miles I find that the crank shaft bearings and those of the connecting rod are worn badly. The machine then makes a lot of noise. The motor is of 4-inch bore and stroke. I have run it one season and my cyclometer shows 2,100 miles. After the first 1,000 miles the motor rattled

and knocked so badly that I overhauled it and put in new bearings. Thinking that perhaps I had not used oil freely enough, I watched this feature closely and know that in the next 1,000 miles of running there was always plenty of oil on the bearings. Yet they again wore out as before. The crank shaft bearings in the crank case, as well as the connecting rod bearings, are bronze lashed. When the motor was overhauled the best hard brass was used for the bushings. The motor runs at from 400 to 1,400 revolutions per minute and is geared on the high speed at the ratio of five to one. I generally drive the car about 12 or 15 miles an hour. It can run twice as fast. The total weight of the car is 350 pounds. I run the machine very carefully and always take every precaution to keep the motor running as smoothly as possible. I think the motor bearings ought to give a longer wear. What is the cause of this undue wearing and how can it be remedied?—G. C. S.

The trouble with the motor can only be poor design. Operating the car as stated, using plenty of oil and low motor speed, a well designed motor would show no appreciable wear for at least 4,000 miles. There is only one thing to be done—reduce the load per unit of bearing section. This can be accomplished by making a new crank shaft, either increased in diameter or lengthened in the crank pin and crank shaft bearings. This necessitates, of course, new bushings all through.

## CLANNING A MOTOR

Devils Lake, N. Dak.—Editor *MOTOR AGE*—I have been advised to inject kerosene into the cylinder of an air-cooled gasoline motor to clean it of the deposit of soot, etc. Is this advice correct? The motor is vertical with the relief cock on the cylinder head. After the injection would the kerosene have to be removed from the cylinder or would it pass down into the crank case and be left there? Is a spark plug with stone insulation good for use with an air-cooled motor? What is the best way to remedy slipping in a leather faced, band friction clutch?—HARLAN R. FANCHER.

Kerosene injected into the cylinder will clear the carbon deposit from the valves and cylinder. While the motor is in operation cut out the spark and inject the kerosene. The motor will blow it out of the exhaust, leaving a clean cylinder. A plug that will operate satisfactorily in a water-cooled cylinder will do the same if the cylinder is air-cooled, provided that there is sufficient radiation for the latter. The slipping of the clutch can be reme-

ed by using a new brake wheel and band, either of larger diameter or greater width. An occasional application of belt dressing to the leather surface will probably be all that is required. See that the rivets holding the leather to its retainer have not cut through so as to bear on the drum. If they have, it would be advisable to replace the old leather with a new one.

## WIRING A MOTOR

Ashtabula, O.—Editor *MOTOR AGE*—How should a double-cylinder motor be wired from a double coil? Will you kindly show diagram?—C. H.

As the number of terminals on the double coil is not stated *MOTOR AGE* will illustrate the wiring for two separate coils, which will probably give the information desired. The two coils are indicated at A and B, with one secondary from each leading to the plugs C. The other two secondary wires are joined and grounded on the motor, as indicated at D. One of the battery wires, E, is also grounded and the other battery terminal is connected to one primary terminal of each coil. The remaining two primary wires, one on each coil, are connected to the two contact arms on the circuit breaker F. The arms, of course, are insulated. In case the spark occurs in the wrong cylinder, reverse the wires to the circuit breaker arms.

## MOTOR MATERIALS

Fond du Lac, Wis.—Editor *MOTOR AGE*—Why are not aluminum pistons used in gasoline motors? They would be lighter and cause less motor vibration. Would not brass packing rings on the piston be better than cast iron ones for running with a steel cylinder? If not, why not? Why is not steel more commonly used for cylinders instead of cast gray iron? It would be lighter and stronger. Would not steel be better than cast iron for the cylinder of an air-cooled engine? I understand that steel cylinders are used on some of the French racing cars.—A. J. F.

Light pistons certainly would be an advantage regarding vibration and motor speed, but wear upon aluminum is excessive and even if flooded with oil, it cannot be used in a cylinder. Steel, hardened, will run fairly well, but

of course this construction is impossible in motor design. A brass ring would lose its elasticity, to some extent, in the presence of the cylinder heat. Rings should be of the same material as the piston so that the expansion will be the same. Otherwise there will either be a longitudinal play of the ring in the groove, or else the ring will stick when the motor is in operation. A ring is a double-seated check valve and as such must be a perfect and absolute fit under all operative conditions. A water-cooled motor cylinder must have either a water jacket cast around it, or various flanges and lugs for attaching one. There must also be the lugs for the valve connections, ignition plug and water connections. With a cast iron cylinder these can readily be arranged. A steel casting containing intricate core parts such as are found in engine cylinders, could only be cast at a great expense and a loss of many castings. Cast steel is usually porous; not on the skin, but in blow holes that do not show on the surface, which continually leak. A cylinder could be worked out of a forging and by brazing the lugs and flanges made to do service, but the expense precludes the manufacture. The European cars with steel cylinders are specially built where light weight is the object sought. The cylinders are often of steel tubing, which necessitates joints that must be packed. Cast iron is much better for use in connection with an air-cooled motor.

## VALVELESS ENGINE

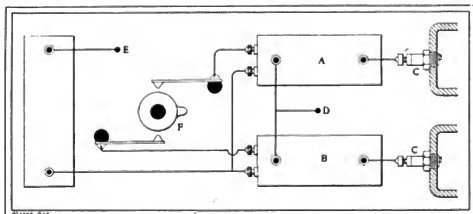
Leavenworth, Kan.—Editor *MOTOR AGE*—I would like information relative to a valveless gasoline engine. I recently saw a catalogue of a small boat engine which was claimed by the maker to be valveless. I do not understand how there can be such a construction. If it is possible is it practicable?—D. R. ANTHONY, Jr.

No engine can be valveless. In a two-cycle motor the piston uncovers the ports for the inlet and exhaust. The piston in this case is its own valve. Probably the manufacturers mean that such construction obviates the ordinary poppet valve of the four-cycle motor.

## RECOIL IN MOTORS

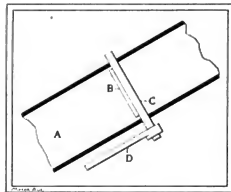
Decatur, Mich.—Editor *MOTOR AGE*—If the head of a single-cylinder horizontal motor were placed toward the front of the car would the recoil from the explosion tend to drive the car ahead?—A. E. LAWRENCE.

Explosion in a sealed drum not sufficiently powerful to produce rupture, develops a rise of temperature and pressure, but no recoil. In an engine cylinder the piston forms a movable seal. Upon ignition the piston and cylinder



WIRING TWO-CYLINDER MOTOR FROM TWO COILS





THROTTLE IN INLET PIPE

are forced apart with equal pressure. The cylinder is carried in the frame and so are the bearings to which the piston movement is transmitted. This is similar to the explosion in a drum, in that the action and reaction are absorbed by the same member, and differs because the rise of temperature under constant volume is changed to a rise of temperature under constant pressure. If a projectile discharged by a piece of ordnance should strike a plate attached to the mount as soon as it reached the muzzle there would be no recoil as the action would balance the reaction. The position of the motor cylinder axis cannot accelerate or retard the speed of the car.

#### CANVAS MOTOR TIRES

Sutton, Neb.—Editor *MOTOR AGE*—Has there ever been an attempt to make outer casings for automobile tires on the principle of the stitched canvas belt? It seems to me that this could be done, for although the canvas stretches more than the rubber it wears much longer and can be repainted when it becomes worn, and thus made to look as good as new. Such a tire would be nearly puncture proof and would not have to be sold at the excessive price of the rubber casing. Probably a complete canvas casing could be sold for \$5.—J. M. WEBER.

The canvas case, as a separate part of the tire, is now manufactured as a tire protector. The construction of most foreign tires consists of but a little rubber on the tread. This soon wears through and the life of the tire does not seem to be diminished in any way, although the wear is then entirely on the fabric. A casing made entirely of canvas would, however, not have the elasticity of the rather heavily rubbered American tire.

#### MOTOR THROTTLE

New York—Editor *MOTOR AGE*—Will you kindly present a drawing of a simple throttle to be applied to a de Doria style of 2½-horsepower motor cycle engine? Where should this throttle be applied? What number of teeth should be used on the sprockets to furnish a speed reduction of six or seven to one, driving through a system of four sprockets, two being on a counter shaft? How can back firing in an automobile motor be prevented?—W. W.

In the pipe line A, in the accompanying illustration, between the carburetor and the valve insert a flat disk B a trifle smaller than this inside pipe diameter. Solder to this a 3-16-inch rod C, which has at its extremity a lever D to operate the throttle. A hole 3-16-inch in diameter is drilled clear through the pipe A to give a bearing for the rod C. Place this valve close to one end of the pipe, so it can be soldered after in place. This should preferably

be close to the cylinder. With the valve as shown the motor will be throttled. A rotation of 90 degrees will give the full opening. The number of sprocket combinations is infinite, but as it is probably desired to use sprockets of nearly the same size the following will do nicely: Driving sprocket, ten teeth; driven counter shaft sprocket, twenty-five teeth; driving counter shaft sprocket, ten teeth; finally driven sprocket, twenty-five teeth. In this case there will be but two sizes of sprockets and the drive ratio will be one to six and one-fourth.

#### CARBURETOR AIR INLET

Town City, La.—Editor *MOTOR AGE*—What is the largest air opening that can be used to advantage in a carburetor of the mixing valve type on a single-cylinder gasoline motor of 4½-inch bore by 5½-inch stroke, running at a maximum speed of 1,000 revolutions per minute? What horsepower should this motor develop?—E. D. C.

It will be of no advantage to have the air opening greater than that of a 1½-inch circle. Assuming good compression the motor should develop 5½ horsepower at the speed mentioned.

#### CASTING CRANK CASES

Buffalo, N. Y.—Editor *MOTOR AGE*—I am having more or less trouble on account of shrinkage in casting three and four-cylinder aluminum motor crank cases. If the patterns have very heavy lugs, there occurs in nearly every case shrink holes underneath them. Although we use risers in most instances we meet with no better results. Can you suggest anything to overcome this shrinkage?—H. B. F.

Use several risers and gate so the metal will run rapidly. Have the patterns made with at least four good substantial prints. The holes near the lugs are due to the size of the latter. Either lengthen the lugs or have more metal adjacent to them. This extra metal could be a continuation of the lug and cut off afterwards. Have it taper from the size of the lug to nothing at the back.

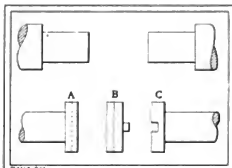
#### WET VERSUS DRY CELLS

Maldea, Mass.—Can you tell me through the *Readers' Clearing House* what to use for a liquid battery of 6 volts in place of ordinary dry cells? Although I have never experienced trouble with dry cells I am told that better results are obtained with liquid batteries. I wish to make these cells myself. How often would the cells have to be renewed? My coil will not stand more than 6 volts.—W. H. PEMBRICK.

*MOTOR AGE* advises the use of the dry battery. The years of automobile development have opened the greatest field for battery manufacturers. In the infancy of the industry a dry battery could not be found that possessed any life. The battery manufacturers have long since perfected the dry battery. It is a case of survival of the fittest and it will be better to buy dry cells than to make a wet battery which will be constantly slopping over and continually necessitating the replacement of broken jars.

#### SHAFT COUPLING

Ann Arbor, Mich.—Editor *MOTOR AGE*—The accompanying sketch represents the adjoining ends of the shafts of the motor and transmission gear of my car. They do not coincide, being just enough out of line to necessitate some sort of a flexible coupling. I have been told that it is impracticable in this case to use



THE ADJACENT SHAFT ENDS COUPLING FOR MISALIGNED SHAFTS

Hookes joints, because of the closeness of the shafts and of the high speed. Can this style of joint be used, and, if not, what style of coupling should be made?—H. W. McCLELLAN.

Unless the axes of the shafts intersect a Hookes joint would not do. *MOTOR AGE* advises an Oldham coupling, which will care for this misalignment perfectly. It consists of three pieces, of which A and C are keyed, one on the crank shaft and one on the transmission shaft. These should be of steel. The sketch shows a slot in each. Piece B is the floating member, which consists of a steel disk with a tongue on each side. These tongues are placed at right angles to each other and fit nicely to slide in the slots of A and C. When assembled the floating member should be allowed at least 1-16-inch play lengthwise of the shaft. This coupling will take care of shafts with axes that are parallel and not coincident and of shafts whose axes do or do not intersect. Its efficiency, of course, decreases with the magnitude of the misalignment.

#### USING PIERIC ACID

New York—Editor *MOTOR AGE*—I recently noticed in an English paper a description of a "pierator," in which the gasoline simply runs through the pieric acid. The device consists of a long tube with a screw cap on one end, by the removal of which may be inserted an inner receptacle with a gauze cap on each end and which is supposed to hold pieric acid in the form of crystals. The gasoline is supposed to enter the outer tube and to flow through the inner one containing the pieric acid, leaving the other end of the device on its way to the motor carburetor. Would the acid produce as much additional power when used this way as when left to stand in the gasoline for a length of time before using?—W. R. W.

This method would be more satisfactory in every way than mixing the acid with the gasoline by agitation. The acid will discolor the hands and nails so care is necessary in its handling. *MOTOR AGE* has seen devices on the order named that have proven most excellent for handling and manufacturing pieric acid.

#### MATHEMATICS OF A MUFFLER

An ideal muffler should reduce the noise of exhaust to the least possible, and put no back pressure upon the piston of the engine. It should obviously, also, be large enough to meet these requirements and no more, space being valuable. It may even be desirable in practice to sacrifice a little of each of these points to the desirability of keeping the muffler as small as possible in the case of the motor cycle and some small cars; but they still remain the ideal, says A. C. Davidson, in the *Antwerp*, of London.

Referring to the first item, the noise to be deadened is caused by the sudden liberation of the exhaust gases under pressure. These expand violently, striking the surrounding air and setting it into vibration, causing the sensation known as a noise or explosion. If gases could be expanded in the cylinder until they came down to atmospheric pressure, the only sound heard would be the hiss of the gas as it passed the exhaust valve. Such a result would be quite possible, and conducive to economy in the engine.

The same result is achieved by making the muffler of such capacity and form that the gas expands in it gradually to atmospheric pressure before being released, and this is the method usually adopted.

There is another method which has lately been tried with fair success, and that is to make the muffler of practically no capacity, but to dismiss the gas through very numerous small openings, the idea being to subdivide the large explosion into numerous small ones, which, not synchronizing, do not produce the same noise; but such silencers must always be inferior to one which allows room for the expansion of the gas to a lower pressure before dismissal.

To avoid back pressure, the holes of either type must be of sufficient combined area to pass all the gas at the pressure at which it reaches them without reducing its velocity, and as the pressure must obviously fall off after passing the exhaust valve, and as the amount of gas passing through any given opening depends directly upon its pressure, the combined area of the holes in the baffles must never be less than that of the exhaust valve.

Before proceeding to actual dimensions the volume of gas to dispose of and its pressure at the moment of release must be known. As no reliable experiments of the pressure in the exhaust pipe are at hand this can best be determined by making an indicator diagram of the engine to be considered. Assuming a piston of 5 square inches area and a stroke of 3 inches, giving about 2 horsepower at 2,000 revolutions per minute, the diagram in Fig. 1 may be obtained; further assuming a compression of one-fourth of the cylinder volume, and  $t$  temperature at admission of 150 degrees Fahrenheit, the gas being heated to 3,260 degrees Fahrenheit, and expanded to its original volume.

From this it will be seen that at the end of the power stroke there is a volume of 15 cubic inches at a pressure of 47.5 pounds per square inch absolute. To expand gas at this pressure down to atmospheric pressure, it must increase 2.3 times its volume, and the capacity of cylinder and muffler combined must be 2.3 times the capacity of the cylinder alone, again supposing that the exhaust valve is large enough, as is generally the case, to liberate the

gas practically instantaneously before the piston returns.

As gas at 47.5 pounds pressure passes through an opening  $\frac{3}{4}$  square inch—about the usual size of valve for such an engine—at the rate of 434 cubic feet per minute, and there are only 15 cubic inches to pass, the time occupied will be

$$\frac{15}{434 \times 1728} = \frac{1}{4900} \text{ minute, and the piston}$$

performs a stroke of 3 inches in 1-4000 minute. Therefore, it will only have moved about  $\frac{1}{4}$  inch; in point of fact, less, as the velocity taken above is its average velocity, and at the ends of the stroke it moves more slowly, so that the emission is unaffected by it and the cylinder may be counted in the available expansion space. It is necessary, then, to provide only for 1.3 times its capacity in the muffler.

If, therefore, there is added to the engine cylinder a muffler of 19  $\frac{1}{2}$  cubic inches, and the gas is allowed to expand in it, there will be no tendency to expand farther and escape, but it will merely be displaced by the piston during its return stroke, and will put no back pressure at all on the engine except the small amount caused by the friction of the air against the sides of the pipes.

So far the requirements are fully met, but the noise, although muffled, will still remain, as the expanding gas, suffering no check after passing the exhaust valve, will still strike violently against the imprisoned air in the muffler, and there will be experienced exactly the same report as if it were allowed to pass directly into the open air, except that this report will be inside a box, the walls of which will to some extent diminish the communication of the vibration to the surrounding air.

To check this still further, the large explosion must be broken up into a number of smaller ones, by passing the gas through a series of holes or baffle plates, and how to proportion these to avoid back pressure must be considered. The theoretical discharge of air through an orifice is given by the following formula:

$$\text{Cubic feet passed per minute} = \text{area} \times 37.8 \sqrt{\frac{\text{external press in lbs. per sq. inch}}{\text{diff. of press. on each side of orifice in lbs. per sq. inch}}}$$

For pressures up to 50 pounds, experiment shows that only .7 of this amount can be emitted on, and the following formula may be used:

$$\text{Cubic feet passed per minute} = \text{area} \times 26.4 \sqrt{\frac{\text{external press.} \times \text{diff. of press.}}{r}}$$

Let it be assumed that three plates are inserted across the mufflers, dividing it into four equal parts. The pressure of the gas at each baffle, and from that the area necessary to pass it can then be found.

With three baffles, the volumes of the expanding gas will be

- At entrance, 1.
- At first baffle, 1 1-3.
- At second baffle, 1 2-3.
- At third baffle, 2.
- At exit, 2 1-3.

The pressure corresponding to these volumes may be calculated on the formula:

$$P^1 = \frac{P}{r^{.908}}$$

$P$  being the initial pressure in pounds per square inch absolute,  $P^1$  the required pressure, and the  $r$  ratio of the volume after expansion to the initial volume.

From this it is found that the pressures will be respectively:

- At entrance, 47.5 pounds.
- At first baffle, 31.5 pounds.
- At second baffle, 23.1 pounds.
- At third baffle, 17.5 pounds.
- At exit, 14.7 pounds.

The following diagram in Fig. 2 shows the results.

It is now necessary to proportion the area of the holes in the baffles so that the velocity of the escaping gas may not be diminished. Taking the area of exhaust valve at  $\frac{3}{4}$  square inch, the quantity of gas passed at 47.5 pounds pressure to a pressure of 31.3 pounds per the corrected formula equals 550 cubic feet per minute.

The first opening into the muffler should be obviously at least as great as the exhaust valve, which with a properly-proportioned exhaust pipe it will be.

Calculating by the same formula the amount of gas passed per minute through a  $\frac{3}{4}$ -square inch opening is

- At entrance, 550 cubic feet.
- At first baffle, 316 cubic feet.
- At second baffle, 225 cubic feet.
- At third baffle, 138 cubic feet.

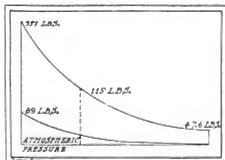
If the velocity of the gas is to remain constant, the areas of the holes should vary in versely as these amount, or be

- At first baffle, 1.3-square inch.
- At second baffle, 1.8-square inch.
- At third baffle, 3.0 square inch.

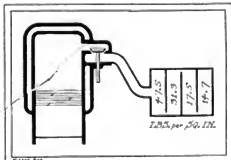
If the total quantity of the expanding gas had to pass through each baffle, these areas would be the right sizes, but when the muffler is completely filled the last compartment has passed only one-third of the cylinder volume, the next two-thirds, the third three-thirds or one, and the entrance four-thirds, or one and one-third the cylinder volume. Therefore, the areas may be reduced in proportion to the volumes they have to pass, and the final result is:

- At entrance,  $\frac{3}{4}$ -square inch.
- At first baffle, 1.3-square inch.
- At second baffle, 1.2-square inch.
- At third baffle, 1.0-square inch.

These are the total amounts to which the combined area of the holes must amount, and the more numerous and smaller they are the better for silencing effect, the practical limit to their smallness being set by the liability of exceedingly fine holes to get choked up. In conclusion, the above figures must not be taken as representing any particular muffler, but from the formula given, and following the same principles, it is easy to proportion any type, whether tubular, cross baffled, or other, so that it shall allow the gases to expand to atmospheric pressure without back pressure on the piston, and with the maximum of silencing effect.



MUFFLER PRESSURE—FIG. 1



MUFFLER PRESSURE—FIG. 2

## FROM THE FOUR WINDS



The first automobile parade on a large scale ever held in Cincinnati, O., was held last week, when over a hundred automobiles paraded part of the city.

Nine permits have been issued to new automobile owners. so far this year, in Akron, O., making a total of seventy-eight automobiles owned by Akronians.

Mr. and Mrs. Maurice Rothschild recently returned to Minneapolis, Minn., after having traveled about 3,500 miles in their motor car through France, Belgium, Germany, Austria and Italy.

The Continental Caoutchouc and Gutta Percha Co., of Hanover, Germany, declared a dividend of 45 per cent for the business year of 1903. This is equal to \$130 for every \$300 share and \$65 for every \$150 share.

The De Motte Motor Car Co. was recently formed in Philadelphia, Pa. The factory is located at Valley Forge in the same state. Bumbouts, touring cars, delivery wagons and trucks will be manufactured by the new concern.

Motor cycle competitions are in vogue in Italy just now. A sporting journal published in Milan has arranged a 1,000 kilometers test for the small cars, while the *Unione Sportiva* has arranged a road race, the distance being about 135 miles.

The Mobile Carriage Co., of San Francisco, has been engaged for service by the various hotels to take care of their cab and passenger service about the city and to the depots. The company has successfully handled the business of the Palace, Grand, Russ house and Occidental hotel in addition to the Hotel St. Francis, with which it has its regular bus line contract.

The officers of the law in Egg Harbor City and Mullica, N. J., have decided to erect a telephone line between the two localities and thus inform the officers in each of these towns whenever an automobilist is noticed on the roads driving his cars at a greater speed than that permitted by the law. To stop the drivers it has been decided to post men on the road, and they will throw strong iron chains across the highway in an endeavor to capture the law-breakers.

A motor bus service will be inaugurated during the earlier part of June between Great Falls and Lewistown, Mont. The distance between the two localities is about 140 miles, and it is expected by the promoters that not more than 9 hours will be required to complete the run. In some parts of the route the highways are reported to be very near their primitive state and it is difficult to distinguish the actual road from the rest of the earth. The people seem quite enthusiastic at the proposed motor line, which will save much time in transit.

Time of the hill-climbing tests of the season in England was held during the latter part of April on Daghwood Hill. The distance was a fraction over half a mile and the grade varied from 8 to 13 per cent. A Chase on a 234-horsepower Chase motor cycle climbed the hill in 59 3-5 seconds, and P. Price, on a Peugeot of similar horsepower, was second in 1:39 4-5. W. J. Turrell in a 6-horsepower Eagle car made the fastest time among the cars, reaching the top of the hill in 2:10 2-5.

Within the limits of the village of Plymouth, N. H., the automobile speed limit is 6 miles an hour; on the highways outside of the limits a speed of 10 miles an hour is permitted. Motor cars meeting a team on the country roads must come to a full stop and allow the horse and team to pass; when the driver of a passing team requests an automobile to stop in the village limit the motorist must do so and is liable to a fine not exceeding \$10 for each offense.

F. A. Newell, a retired jeweler from Attleboro, Mass., drives a Knox tonneau and is touring constantly. He has been in Washington since Feb. 1 and passed through Newark yesterday bound home. He found the roads between Washington and Philadelphia in terrible condition at the present time and about as bad as he had ever traveled over. Mrs. Newell accompanies her husband on all of his trips. In the car he carries 150 pounds of luggage.

A San Francisco journal reports that the police department of the city will soon receive an automobile patrol wagon. If the experiment with this hurry-up-and-get vehicle is satisfactory several will be added to the department.

Some citizen of West Chester, Pa., are worried because there is no automobile ordinance in their town. They intend to start a movement and hope to get their name on the list.

A new automobile factory is to be built in McKeesport, Pa., according to a local report.

The Dumont air-cooled car is described fully in a new catalogue issued by the Columbus Motor Vehicle Co., of Columbus, O. The car making is especially excellent.

There are thirty runabouts and seven touring cars owned by automobilists in Nashua, N. H. There are four automobile dealers in the town and three of them have automobile stables.

The Automobile Club of California has made a change in the dates formerly selected for the races and show to be held at the Ingelside track. Instead of a 3-days' meeting the events will take place June 3 and 4.

Mrs. Garret A. Holbart, widow of the former vice president, owns two French machines now, an 18-horsepower Panhard and a 16-horsepower Darracq. Last week Mrs. Holbart purchased a Knox tonneau to add to her garage.

The new catalogue of the Warwick Cycle and Automobile Co., of Springfield, Mass., is unusually comprehensive in that it shows and describes two styles of automobiles, motor bicycles and bicycles, all Warwicks, of course.

The board of park commissioners of Louisville, Ky., recently decided that automobiles may travel at a speed of 12 miles an hour on straight runs in the parks. At curves and entrances the speed must not be over 5 miles per hour.

The Reid Mfg. Co., of Detroit, Mich., has filed articles of incorporation for the purpose of manufacturing sectional book cases, show cases, refrigerators, automobiles and store furnishings. The new company is capitalized at \$50,000, of which \$2,000 has been paid in cash and \$33,000 in other property. The stockholders are William P. Reid, Lewis R. Reid, and Harmon J. Hunt.

The work of dismantling the plant of the Century Motor Vehicle Co., of Syracuse, N. Y., is going on rapidly. The Syracuse Supply Co. is selling off the machinery and has written to all those who have purchased Century cars, notifying them that their only opportunity for purchasing parts to repair Century machines is at hand. Thus far there has been practically no demand for parts.

There is a great demand for automobiles in Australia and it is reported that several British concerns have recently sent special agents to Sydney and Melbourne, the principal cities in Australia, in order to get a thoroughly reliable report as to the conditions and possibilities of the motor trade. Should conditions be found satisfactory it is likely that the English houses will establish branch houses and even start factories.

A French motorist contributes an article in a Paris journal concerning the cost of his motor car during the 11 months he has had it. He traveled 6,877 miles during 203 days, an average of 33 miles per day. The expenses amounted to \$439.50. Among the items included therein are \$145.70 for gasoline, oil and lubricants; \$96.40 for repairs; \$45.10 for tires; \$35.60 for insurance; \$6 for taxes. The two-wheeled 6-horsepower car cost him originally \$750.

# MOTOR AGE

VOL. V. NO. 20

MAY 19, 1904

\$2.00 Per Year

## AMERICA WILL NOT BE IN IT

Empire City Track, Yonkers, N. Y., May 19—Special Telegram—America will not be represented in the James Gordon Bennett international cup race. The racing committee of the A. C. A. issued the following statement and decision as the result of the lamentable fizzle attending the second trials of the three candidates for international honors, Louis P. Mooers, Barney Oldfield and Walter Christie:

"In view of the fact that Mooers has withdrawn his car, Christie has failed to compete in the trial, and Winton has declined to abide by the regulations provided for the trial, it is decided that no car be recommended to represent America in the Gordon Bennett cup race this year.—Signed—RACING COMMITTEE, Automobile Club of America, by A. C. Bostwick, Chairman.

Today there was but one starter, the Peerless, first of the 1904 racers completed by Louis P. Mooers. It was driven by Charles Wridgeway, and ordered stopped and called from the track by Mooers, after having covered 19½ miles at an easy jog. Mooers, as the only candidate, did not care to send his car as a sole American competitor. Christie was reported on the way to the track, but failed to appear up to 3 o'clock, when the committee had, a half-hour before, rendered its decision. Oldfield was on hand early with Bullet II, but on refusal of Percy Owen to sign the contract drawn up for the indemnification of the club and track in event of damage by accident, did not ride. Owen objected to the following clause in the contract that had been drawn up:

"And the parties of the second part agree

and covenant to indemnify and save harmless the parties of the first part of and from any and all claims for injuries, damages and all claims whatever to person or property, or otherwise, which may be made by corporations or other parties arising of, or in connection with, the holding of said speed trials, or any acts, negligence, mismanagement or omissions in connection therewith, or defects in the condition of the aforesaid grounds or structures thereon."

Owen's contention was that the Winton company made itself liable for damages caused by other cars than its own. This was the view taken by the Winton counsel, and by Mr. Winton, who was consulted by telephone. Owen says that the orders were to refuse to sign the contract, and he simply obeyed orders. Bostwick, Scott and Moore, of the committee, were present, and said that Owen, whether or not he desired amendment to the contract, suggested none.

W. W. Niles, attorney for the club, who drew the contract, said that it simply sought to release the club and track from liability to damages, and left the question of liability among the competitors, an inconsequential matter for decision under common law.

The prevailing lay opinion among newspaper men and those who were allowed to read the contract was that it was drastic and unjust to the entrants, and seemed to make them jointly liable for damages caused by one another and by anyone else who used the track during the day.

The Peerless was sent away 5 minutes past 1 o'clock, Wridgeway driving, with a small boy beside him to conform to the two-passenger rule. He took an easy jog and made no attempt at fast time. The watch showed 6:41 1-5 for 5 miles; 13:28 for 10; 20:50 for 15 miles. At 19½ miles, which he covered in 27:43 2-5, Mooers called Wridgeway from the track and formally withdrew from the race.

There were thirty automobiles on hand, and 200 spectators. B. M. Shanley, Jr., drove the Vanderbilt 60-horsepower Mercedes once around in 1:14 2-5.

Oldfield will now be the star feature of the Empire City track meet, Saturday, June 4.

This fiasco puts an end entirely to America's hope to be well or at all represented in the international cup race, which is to be run over the Taunus road course, in Germany, June 17.

Representation has been doubtful for several weeks, but when the Automobile Club of America decided to give all of the entrants another trial to-day, on the Empire City track, in a 200-mile race, a new lease on hope was taken, and it was expected that some, if not all three of the entrants, would make good and be accepted.

Unless other countries drop out there will now be seven countries in the race, or twenty-one actual contestants.

American interest in the G. B. race, the international cup race, the Gordon-Bennett race, the James Gordon Bennett international trophy race, or whatever you want to call it, is now limited to betting on which European will get the glory.



LOUIS P. MOOERS—PEERLESS

WALTER CHRISTIE—CHRISTIE

BARNEY OLDFIELD—WINTON BULLET II

# BRITISH CARS SELECTED

**S. F. Edge, Napier, and Sidney Girling and Charles Jarrott, Wolseley, Selected To Represent England in the International Cup Race—Story of Concluding Events of British Trials**

London, England, May 13—One Napier car, driven by S. F. Edge, and two Wolseleys, driven respectively by Sidney Girling and Charles Jarrott, will constitute the British team in the James Gordon Bennett international cup race June 17. This was decided last evening by the race committee of the Automobile Club of Great Britain and Ireland, as a result of the 3 days' trial on the Isle of Man. As reserves will be two Napiers, manned by J. Hargreaves and J. W. Stocks.

The decision has not met with universal approval, however, as it is thought the Napier car driven by Earp should have been selected, inasmuch as it certainly made a better showing all round than one of the Wolseley machines which the committee decided should represent the country in the international event.

The second day of the preliminary trials was devoted to a hill-climbing test on the Ramsey hill, the cars being timed over a half-mile stretch with a grade of 7 per cent. Four Napiers and three Wolseleys which had survived the 250-mile road test of the day before made three trials each and again Edge with his big Napier proved the fastest.

None of the three Darracqs started, as all had been put out of business the day before. Mark Mayhew, Napier, had withdrawn also, as well as Campbell Muir, Wolseley, but inasmuch as the latter's trouble had been merely a puncture he took part in the hill test. The times made in the trials were:

J. W. Stocks, Napier....	38	57 1.5	55 1.5
John Hargreaves, Napier....	38	52	55
Clifford Earp, Napier....	44 2.5	42 4.5	43 4.5
S. F. Edge, Napier....	38 2.5	39	39 4.5
Sidney Girling, Wolseley....	44 1.5	44 2.5	43 3.5
Chas. Jarrott, Wolseley....	47 3.5	48 1.5	51 3.5
Campbell Muir, Wolseley....	50 1.5	51 2.5	50 4.5

The straightaway speed trials, the concluding event of the tests, were run yesterday over the 2-mile boulevard at Douglas, the starting and finishing point of the Isle of Man course used for the road trials Tuesday. The trials had aroused much interest on the island and yesterday Douglas was thronged with country folk come to see this short distance speeding.

Eight cars took part, for C. Rawlinson brought out one of the unfortunate Darracqs. Otherwise the starters were the same as in the hill-climbing test. But two trials were given each contestant, the third trial being called off, owing to an accident to Clifford Earp. Napier, just after the running of the second trials. This accident injured both Mr. Earp and his brother and smashed the car, which otherwise would in all probability have been selected as one of the English team instead of one of the Wolseleys.

Edge was fastest of all and in each of his two attempts drove his 80-horsepower Napier over the flying kilometer in 39 seconds.

The trials were started at noon and each was timed from a standing start over ¼-mile. Then it was timed for a flying kilometer, making the total distance .87 of a mile. This composite trial had been decided upon in order to determine the ability to get under way quickly as well as to drive at high speed from a flying start. The course was not the best,

having in it three bends and being marred by street car tracks. The times made in the flying kilometer trials were:

S. F. Edge, Napier.....	39	39
Clifford Earp, Napier.....	42	42 3.5
Sidney Girling, Wolseley....	44 4.5	43
Charles Jarrott, Wolseley....	45 2.5	45 3.5
C. Rawlinson, Darracq.....	46 3.5	48 3.5
Campbell Muir, Wolseley....	47	47
J. W. Stocks, Napier.....	47 1.5	48 1.5
John Hargreaves, Napier....	49 3.5	47 3.5

The accident to Mr. Earp did not occur during the actual speed trials, but was due entirely to a display of injudicious driving on the return journey up the course. The competitors were proceeding on the backstretch for a third time, when Mr. Earp found he was approaching somewhat too near to a barrier stretched across the road at the southern end of the course.

He put on his brakes too abruptly and the car skidded either on the tramway lines, or, owing to the fact that the road shelved deeply toward the edge; the result was that while traveling at high speed the car dashed into a wall and was completely wrecked.

Mr. Earp and his brother, who acted as his mechanic, were picked up senseless. No spectator should have been on that side of the road, but a youth who strayed in that direction was struck by the car, but was not seriously hurt. The driver's brother sustained a slight fracture of the skull, but Clifford Earp was only stunned and bruised.

On hearing the decision of the race committee, S. F. Edge wrote a letter of protest against its action in withdrawing Mr. Earp from the race team after his excellent performances. Mr. Edge said he regarded the decision as illogical and premature, seeing that Mr. Earp had been selected as second string in the team. If Mr. Earp is not allowed to compete he, Mr. Edge, says that he will decline to allow his name to be included among the English representatives.

## CUP WEEK TRACK RACES

The German Automobile Club has published the program of the race meet which will be held at Frankfurt-on-Main, June 19, following the international cup race. It is expected that several of the drivers in the James Gordon Bennett race will take part in the track events, for which about \$1,000 in cash and many art prizes will be given. The program in detail is as follows:

Three-mile motor cycle race for amateurs. Total prizes valued at \$175.

Five-mile race for cars not weighing more than 880 pounds nor of more than 15 horsepower and using alcohol for fuel; professional drivers; each car carrying a passenger. Total prizes \$150.

Five-mile race for cars not weighing more than 880 pounds and with one or two-cylinder motors of not more than 14 horsepower; amateur drivers; each car carrying a passenger. Total prizes valued at \$275.

Ten-mile race for cars not weighing more than 1,450 pounds nor with motors of over 40 horsepower, and using alcohol for fuel; amateur drivers; each car carrying a passenger.

ger. First, second and third prizes donated respectively by Emperor William, the German Automobile Club and the Automobile Club of Frankfurt.

Eight-mile race for cars weighing not more than 1,320 pounds and of not more than 24 horsepower; amateur drivers; each car carrying one passenger. Prizes valued at \$312.

Ten-mile race for touring cars weighing not more than 2,200 pounds including four passengers and of not more than 30 horsepower; amateur drivers. Total prizes valued at \$275.

Ten-mile race for cars weighing not more than 1,320 pounds; amateur drivers; each car carrying one passenger. Winner to get \$1,250 challenge cup now held by Willie Poege; other prizes valued at \$250.

## CUP RACE ARRANGEMENTS.

Count Sierstorff, of the sports committee of the German Automobile Club, while in Paris May 3, said the club had decided that the following localities on the Taunus route would be neutralized: Uaigen, Weiburg, Limburg, Idstein, Königstein, Obersursel and Homburg. It will require 43 minutes per circuit to pass through these seven localities, and as there will be four circuits there will be a loss of 2 hours 52 minutes.

An immense board will be put up near the press and grand stand. Upon this will be given information on the progress of the race. It is possible that flags will be used to indicate the nationality of the cars.

The route will be guarded by 4,500 men, not including those at the start. Nearly 18 miles of crossings will be barred with wire fences. The grand stands are being finished and will be nicely decorated. The builders have been given plenty of time to build them securely. The telegraph and telephone office which the government is having erected cost nearly \$20,000 and will be spacious and well-equipped. It will be located near the start and finishing point and be guarded, so that newspaper men will not be inconvenienced in their duties.

The count added that as the date of the event is approaching the nation is becoming more interested in the matter. "It is no more spoken about as simply an automobile race, interesting only the automobile trade and its followers, but it is now spoken about as a national event, which will have a tremendous counter effect upon the automobile trade of Germany should we win the race." The kaiser although overwhelmed with all kinds of political matters, has given instruction that he be posted on everything concerning the event.

## JUNE 17 A HOLIDAY

Emperor William has formally sanctioned the James Gordon Bennett international cup race to be run in Germany June 17. By his order the day of the race has been declared a legal holiday throughout the entire territory of Wiedbaden, the section in which the cup race is situated. The schools and the governmental municipal offices will be closed.

## MOTOR DAY IN DENVER

In Denver, Col., May 31 will be automobile day. In the morning there will be a parade of as many of the local automobilists as can be gotten to participate. In the afternoon there will be an open air show by the dealers of the city, this feature being in connection with a track race meeting. The program of the latter includes thirteen races for all classes of machines.

# TALK OF AMERICAN TRIALS

**This Week's Try-Out of International Cup Race Candidates Discussed on All Sides—Gossip of Track Aspirants—Looking at Virginia Beach Again—Louis Mooers Arrested**

New York, May 15—Pending the result of the 200-mile trial of the candidates for the American team in the International cup race at the Empire track next Tuesday discussion as to whether or not the automobile club should award its entry has been halted. The hope is general and sincere that all or at least one of the cars will make good, that there may be no prolongation of a discussion both injurious and humiliating to the American sport and industry.

Now that the committee has yielded to the appeal of the entrants and the very general desire of the fraternity for another trial should a second failure be scored, it is more than likely that public opinion will be against the further heroic pursuit of a forlorn hope on the mere grounds of so-called sportsmanship and getting useful experience from defeat. It may be stated with assurance that the temper of the committee is against sending any car that fails to make good in this second trial which has been given it.

The committeemen are somewhat nettled at the criticisms of the insufficiency of the tests they gave the candidates and hint at the development of defects beyond those alleged by their makers as the only causes for the failure of their cars to make good. The decision to grant a second trial, of course, smothered whatever report the committee could have made of the state of affairs as it found it from the first tests.

"It was not our fault," said one of the committee to a *MOTOR AGE* man, "that the cars stopped and could not even reach the hundred mile limit we set. The printed reports of what happened to the cars rest entirely, you must remember, on the statements of their makers and drivers, who desired another trial and would naturally wish to conceal facts that might result in their rejection or public prejudice. It is to be hoped that the second trial will result in all of the cars making good. In any event their builders cannot say that every chance was not given them."

The general impression is that the proposed test will be sufficient enough to justify the committee in sending to Homburg any car that can go the 200-mile run in creditable time. The course is now in use by 300 trotters and cannot be rolled into race meet condition. Its softness will give a fairly difficult test and the constant turns will reproduce the many curves of the German course. In the absence of any road available for racing it is surely the best course the committee can offer under existing conditions. It is not thought that the constant and gradual turning will be so very much more of a strenuous strain on tires and machines than the sharp curves of the Homburg course could present.

An error was made by *MOTOR AGE* in interpreting the telegraphic dispatch on the conditions of the second trial. As in the real race gasoline and water must be taken on board the car outside the control and poured into the tanks inside the control. This rule is presumably to give a car that can run a long distance without having to stop for gasoline

or water due advantage and credit in its aggregate running time.

The trials will not begin before 1 o'clock in the afternoon and possibly not before 2 o'clock, as they will have to follow the training spins of the trotters, whose owner has courteously consented that day to crowd them into the forenoon hours. President Butler's courtesy in giving the club the use of the track for the trials at so great an inconvenience to its proper tenants is being commended and is another illustration of the strength of the fraternity the good roads crusade has created among the horsemen and automobilists of the metropolitan district.

President Butler also favors open gates that day, believing that the trials can thus be made a boom to automobile racing and that the tests are a matter of general patriotic interest. He has, however, given the club the control of the track that day, reserving for the members of the New York Driving Club their right of access to the track at all times. Though no announcement of wide open gates will probably be made, it is likely that the trials will be practically a public one.

It is said that Oldfield and the Bullet will be here to-morrow. Mr. Mooers says that the two Peerless cars will arrive on Thursday morning. Though no announcement has yet been made by Mr. Mooers it is believed that Charles G. Wridgway and Joe Tracy will drive the Peerless candidates. Secretary Reeves, of the Empire track, says that owing to its use by the trotters the cup cars and drivers will have no chance for practice on the track before the trials.

Several New York cars will be among the participants in the meet at Point Breeze, Philadelphia, on May 28, and at the Readville, Boston, races on Decoration day. At the former the Stevens-Duryea "Spider," which holds the world's mile straightaway record of 37 1/3 seconds in the voiturette class, has been entered by Woolston & Drew, of this city. At this meet Nathaniel Huggins will also start his 40-horsepower Deauville racer, a twin machine to the Henri Page car that scored a 15-mile track record last season. Hilliard, his chauffeur, will drive it. If possible the car will be shipped to Boston in time to run on the following Monday. The 60-horsepower Fiat, a counterpart of the international cup racers to be driven by the Italian team in the Homburg contest, which is expected to reach this port on Wednesday, will also be driven by Claude Fogelin in the free for all for the Boston Herald cup that day. E. D. Hollander will also drive a 24-horsepower Fiat in the 5-mile race for toning cars with all on, limited to that power.

Joe Tracy will surely make an attempt with the 1903 Peerless cup racer to lower the Commonwealth avenue record of 15.2.5 seconds scored by S. H. Bowden, Mercedes, and H. D. Hills, Richard, on April 19. The car had trouble with its gears that day and was left in Boston. When new gears are fitted, the Chronograph club has consented to time Tracy's attempt.

Glen D. Stuart, former manager of Barney Oldfield, is having built at Buffalo two 70-horsepower racing cars, whose completion is expected within 2 weeks. They will be driven by John J. Lavin, a former peacemaker for Eddie McDuffie, and Lutz Callahan, a cycle racing veteran.

W. H. Piekens, the owner of the Ford 990, is negotiating with Eddie Bald to be its driver in exhibition and open races this season. But the former cycle champion is at present at the Electric Vehicle Co. factory studying the mechanism of the Columbia gasoline car with a view to acting as a salesman and demonstrator of it and also of piloting a racing car of that make should the company decide to build one.

Lee Straus, who brought about the premature inspection of Virginia beach as a race course when it was in no condition to do itself justice, has returned from another inspection of it and pronounces it now in ideal condition for racing. Accordingly he has applied to the racing board for a sanction for September 26.

"I went all over the beach," said Mr. Straus yesterday, "and found for about 7 1/2 miles, from the Princess Anne hotel to the wreck, as fine a stretch for racing as I have ever seen. On this we will conduct races of from 1 to 5 miles, and every race will be in plain view of the beach walk."

It is said that Harlan W. Whipple, president of the A. M. A., intends to take his new 80-horsepower racing car from Baltimore to Virginia beach to give it a trial.

Louis P. Mooers was arrested for speeding on Saturday and had to appear in court yesterday morning and pay a \$5 fine. He was driving a Pierce motorette at the time.

## CLEVELANDERS CONFIDENT

Cleveland, O., May 16—Louis P. Mooers of the Peerless company has returned from New York and has rushed the work of pulling the two Peerless cars to pieces to repair the defects that caused the trouble at the first elimination trials last week. He stated that by polishing the pistons slightly, all danger of the recurrence of the former accident would be eliminated. Mooers expressed himself as greatly pleased with the courtesy shown by the race committee and he says that if either of his cars fail to show up satisfactorily he will have nothing more to say. Both Peerless cars will be shipped to New York tomorrow evening. With Mr. Mooers will go W. H. Starring, who was with Mooers in Ireland last year, who it is expected will drive the second Peerless car in the elimination trial.

Winton Bullet II is already in New York, having been shipped from the factory Saturday evening. Charles Shanks says that the car is now in perfect condition, the parts that gave trouble before having been repaired and strengthened. Barney Oldfield leaves for New York today and he is taking with him an abnormal amount of confidence in his ability, not only to make a showing in the second elimination trial, but in his chances for scoring in the big contest itself.

## NEXT NICE MEET IN FEBRUARY

At a recent meeting of the sports committee of the Automobile Club of Nice, France, it was decided to hold the annual meeting next year between February 5 and 19. An effort will be made to induce more prominent drivers to participate in the races.



# MOTOR AGE

Published Every Thursday by  
THE TRADE PRESS CO.

1303 MICHIGAN AVENUE CHICAGO

Telephone Calumet 3011

  
 Automobile Club of America  
 1234 N. Dearborn St.  
 Chicago, Ill.

  
 American Motorcyclist Association  
 1234 N. Dearborn St.  
 Chicago, Ill.

  
 National Automobile Association  
 1234 N. Dearborn St.  
 Chicago, Ill.

Entered at the Chicago Post Office as Second Class Mail Matter

Subscription, Two Dollars per Year

Foreign Subscription, Four Dollars

Any Newsletter may obtain Motor Age through the Western News Co., Chicago, or any of its branches, on a returnable basis

## DOING A GREAT GOOD

**A**UTOMOBILISTS are continually held up to the public by motorphobes as dangerous enemies to society. Some of the great daily papers of the country are not just the stage of vituperative editorials tending to create a popular antipathy toward automobiles, automobilists and automobilism.

Farmers have organized to hunt with shotguns for automobilists.

A great sentiment has been stirred up against the modern vehicle. It will probably be unavailing in the long run, but just now it has placed all automobilists upon the defensive in the use of the highways. They have been branded criminals and must prove themselves otherwise.

Yet all the time the automobilists are reformers. They have started a movement so far reaching in its effect upon society that it is hardly realizable.

The beneficiary results of automobilism made common can be recited without end. Many of them have already been brought to the attention of the public. Like the seeds of all reforms, they will be sown and reaped before the good, slow old "public" fully awakens to the kind of fruit that may be harvested.

Many single phases of automobilism are of unimportant proportions when considered in the full extent of their possibilities. Take the effect automobilism is now having on the real estate business. In what is casually but a commercial matter of more or less importance is a great movement toward a different way of living.

Real estate men say that automobilism has increased the value of country and suburban property.

This means that even with the number of automobiles in use today, owners thereof have created a marked tendency toward the increase of suburban residence.

Multiply this number of automobiles by hundreds and even thousands and the rush to the country will be astounding.

A Minneapolis real estate man speaks upon this subject as follows:

"As a general proposition the comparative value of real estate depends upon its accessibility to the business district, physical features being equal; and any agency that will tend to reduce distances, as the automobile un-

questionably does, must inevitably enhance the value of outlying property, while it may, conversely, reduce values slightly in the district nearer downtown.

"The owner of an automobile who lives, let us say, on the shores of a suburban lake, is at least, a half hour nearer to his office than the man who depends upon street cars, and if his time is worth anything, he is just that much ahead. In other words, his property is worth an hour more a day to him than it was before the automobile was made a practical adjunct of metropolitan transit.

"The automobile, then, should increase the value of property in the vicinity of the lakes and in suburbs generally, and should open up large tracts of picturesquely located property to settlement.

"Even in the east, where the automobile is being used more generally than it is here, its importance as a factor that must be reckoned with in the real estate market has not been appreciated, but a few minutes' consideration will persuade any one that the automobile, when its utilitarianism shall become recognized by people generally, will mean a practical overturning of present real estate values."

The automobile takes people into the country more conveniently than any other medium. More surely than any other medium it links the town with the country.

Both as a private vehicle and as a vehicle of public service it provides a class of suburban transit not realizable in any other way.

It assures that rich and even moderately prosperous men may have their homes in beautiful but heretofore inaccessible country places and still be within easy reach of the city place of business.

It means that public service routes may be established which better than trolley or train will take a man from his country home to his city place of work.

If those reformers who are just now seeking to counteract the tendency toward overpopulation of the cities will make the automobile one of their agents, they will find in it a means beyond compare to an end so sweeping in its effect that the whole countenance of metropolitan society will be changed.

Good roads and good automobiles will do more for society than society imagines.

## MOTOR BICYCLE WEIGHT

**F**ROM various sections of the country there has come a strenuous protest against the proposed limitation of motor bicycle contests to machines weighing not more than 110 pounds.

This contemplated action is due to resolutions passed a short time ago by the Federation of American Motorcyclists, in which resolutions the National Cycling Association, which controls motor cycle racing, was asked to set this maximum weight upon all competing machines.

Immediately upon the publication of the adoption of these resolutions, motor cyclists set up a howl. Two of the several letters upon the subject which have reached Motor Age are published in another page of this issue.

The National Cycling Association has not taken action definitely in the matter and it may not revise its rules in accordance with the request of the F. A. M. As a possible revision, however, the projected weight limit and the protests of motor cyclists to it are deserving of consideration.

Those responsible for the resolutions have doubtlessly aimed with good intention, but

have aimed too low. They probably sought to so restrict motor bicycle contests that the practically useless racing freak would be barred. In so doing they named a weight limit which substantially bars all but one of the commercially prominent styles of motor bicycles.

It may be true enough that 110 pounds is heavy enough for any motor bicycle for ordinary usage. It may not. The F. A. M. is not exactly in a position to pass final judgment upon such a point with a view to radical "reformation" of motor bicycle manufacture.

Many motor cyclists of experience claim that the heavier machines are, better for cross-country work than the lighter ones. The point is one of the unsettled features of a young industry. The F. A. M. is jumping at conclusions in seeking to lay down hard and fast lines for a sport that is just beginning to be developed.

Racing freaks are not to be encouraged. They serve no practical purpose. On the other hand, there are many good motor bicycles which weigh more than 110 pounds and which are far from being freaks. These machines, their makers and their riders have a right to be recognized in American motor cycling contests.

To place an arbitrary limit upon motor bicycle weight at a time when the construction of motor bicycles is far from standardized and in a measure that shuts out of the sport the machines of a dozen of the prominent manufacturers, some of them pioneers in the field, would be unjust, short-sighted and suicidal.

It is to be hoped that the National Cycling Association will not need to the request of the Federation of American Motor Cyclists; or, better still, that the latter body will modify or withdraw its resolutions.

## INTERNATIONAL RELATIONS

**I**T IS said British automobile manufacturers and dealers are alarmed at the latest board of trade returns, which show a decrease of exports and an increase of imports of automobiles. In January, for instance, 325 automobiles were imported into England and only fifty-five exported. However, seventy-eight motor cycles were exported against fifty-one imported in that month. But in parts of motor cycles, ten imports exceeded the exports nearly fourfold. The excess was still greater in the imports of automobile parts, being fivefold exports. In fact, there are really no all-British-made automobiles. Those turned out there contain parts imported from the United States and the continent. France has a long lead in the making of automobiles. England, hampered for years by adverse legislation, has only fairly begun, and hopes in time to overtake France. But, as noted above, the latest returns of foreign trade are disturbing.

Official figures show that the shipments of automobiles from the United States to its noncontiguous territories are increasing in value. Shipments to Hawaii increased from \$1,900 during the 9 months ending March, 1903, to \$4,333 during the same period of 1904. The shipments to the Philippines increased from \$2,085 to \$3,152 during the same period. There was, however, a falling off in the shipments to Porto Rico, the value declining from \$7,323 to \$2,500 during the periods under consideration. In the course of time the noncontiguous territories of the United States will offer an inviting field for American automobile manufacturers and they will do well to study thoroughly the needs of these countries and their get in on the ground floor.

## JUMP SPARKS

Good morning, have you secured an 'injunction yet?

The mayor of Syracuse, N. Y., is to take the members of the city council out for an automobile ride and dinner. What's the game, Mr. Mayor?

There are a few people who still question the reliability of the automobile, but they probably haven't heard that an English machine ran over a thousand miles before the motor was stopped—not before the motor stopped, mind.

On the tour to St. Louis, when the Illinois roads are met, there will be no wild scramble to get to the front; the wise motorist will bring up the rear and receive the benefit of the improvement the automobiles ahead of him will make in the roads.

It is the fashion now to entertain foreign potentates, princes and other royal personages by giving them automobile rides. A member of the Chinese royal family has thus been entertained in almost every town from San Francisco to Chicago. Pretty soon nothing will satisfy his princelings but a balloon ascension.

One, two, three or four cylinders?  
Air or water cooled?  
Chain or shaft drive?  
Pneumatic, cushion or solid tires?  
Jump or make and break ignition?  
Sliding or planetary gear?

Will some one please settle these burning questions?



There has been erected in front of the garage of the Chicago Automobile Club a sign reading: "For Members Only." It's a shame the fellows cannot take their cars in too.

E. J. Pennington has again failed. This is not so surprising as that the people of Cleveland should let him get into business far enough to be able to fail.

Fame is a great thing. An Illinois newspaper refers to England's premier racing automobilist as "a man named Edge."

What's the matter with starting now to build some racers for the 1905 international cup race?

What yawns a valet can tell when he quits his master's service!



The alcohol motor car is sure to come. Atlantic City has a motor police patrol that is used exclusively for the conveyance of intoxicated persons.

A Columbus newspaper, in reporting a 250-mile automobile trip, says that Sinking Springs was the last stop. It surely ought to have been.

General Kuropatkin ought to have a few racing automobiles to do his retreating stunt in up-to-date style.

Emperor William has made the day of the international cup race a holiday. Horch der Kaiser!

These wonderfully fast automobile boats are pretty slow about coming out.

## TIMING AUTOMOBILE EVENTS

The timing of speed contests of any sort, and particularly an automobile event on a straightway course, is a most exacting undertaking, one that cannot properly or accurately be performed by any and every man. The holding of a watch on an event on a circular track requires considerable practice and familiarity with the delicate timepiece, and when it comes to applying the same principles to a straightway event, such for instance as that of the recent hill-climb in Boston, the task becomes twice as difficult, for not only is the eye to direct the brain and the hand, but the sense of hearing is brought into play.

Boston is particularly fortunate in having within her confines one of the best known timing organizations in the country, which, by

the way, has gained considerable fame through its over efficient work, and which is known the country over as the Chronograph Club of Boston. Formed some dozen years ago to bring about a reformation in the timing of bicycle races and bicycle record trials, the club has kept pace with the vehicular developments and while still paying particular attention to cycling has not overlooked the timing of automobile contests, as proven by the fact that in automobile circles as in the cycling world the club's times are recognized as official and accurate.

This illustration shows the stand at the finishing mark of the recent hill-climbing contest, with the three officials busy studying the results of the last trial; in this instance it was the ride of H. B. Hills, Jr., who has just crossed the tape. The only gentleman recognizable is George H. Lowe, Boston manager of the White Sewing Machine Co., one of the best known and most able timers in the organization. The gentleman who is concealed by the telephone and who is seated to the right of Mr. Lowe, is Charles E. Fay, for years secretary of the club and who is now identified with an automobile company. The third man, who is hidden by the tapper, is President J. C. Kerrierson, who has held that position for a great number of years.

The system was laid entirely by the members of the club and was found to work most admirably, there not being a single instance when the machines failed to record the starting or finishing of a car, and the fact that not over 5 minutes intervened between cars shows how well managed was the timing. A telephone communication was maintained between the two stands every moment. As a car was ready to start word was sent over the 'phone, and then as it crossed the line at the finish the fact was announced by the ringing of the "tapper" and also over the 'phone, both systems being independent of each other, so that if one had failed to perform its proper function, which was not experienced, the other could be relied upon. Then the same method marked the finishing.



CHRONOGRAPH CLUB CLEAR FOR ACTION

## TOUR IN LITTLE STATE

Motorists From All Sections Visit  
Rhode Island on Sundays—A  
Disagreeable Accident

Providence, R. I., May 15—There is a great deal of touring in this part of the country even at this early date, and last Sunday all of the garages in the city were overcrowded with motorists who came from all parts of Massachusetts and Rhode Island. Almost all of those who visit this city come from points north, and the scarcity of tourists from Connecticut has been one of the most notable features of the season thus far. The automobilists of this city explain this by calling attention to the poor roads that Rhode Island has provided over which automobilists must come, and they say that if the roads could be improved, especially along the shore, that the number of visitors would be very much increased.

Harlan W. Whipple, president of the American Automobile Association, was in this city Thursday evening, having come from Boston in his Mercedes car. Mr. Whipple met the board of governors of the Rhode Island Automobile Club at a special meeting and explained to them the attitude of the officers of the American Automobile Association in favoring the merger of that organization with the American Motor League. At a meeting of the American Automobile Association last week the Rhode Island and the Massachusetts clubs were the only members not represented, and they therefore expressed no opinion on the proposed merger. Mr. Whipple learned that these clubs did not know enough about the situation to warrant an opinion, and he came to Boston and Providence to do a little missionary work. He explained the question to the board and then left for New York. No action will be taken by the local club until the next regular meeting, which will come at the first Wednesday in June.

M. Maurice Dimond, of this city, had a disagreeable experience with his Winton the other day, which was not, by the way, due to any fault with the machine. When he received the car not long ago somebody told him that, in order to protect the working parts from dust and dirt, a leather boot should be stretched underneath, and he took the suggestion seriously and carried it out. While riding along the Apponaug road with his chauffeur a sheet of flame suddenly shot out from both sides and he and the driver climbed out as rapidly as possible. They managed to put out the fire by throwing dirt on the flames, but only after considerable damage had been done. Mr. Dimond says that oil and gasoline had dripped down into the boot and that something ignited the inflammable combination and the fire resulted. An automobile from this city towed the damaged machine to the garage.

## FRISCO MEET PLANS COMPLETE

San Francisco, Cal., May 13—The Automobile Club of California is losing no time in making preparations for the race meeting which is to be held next month. At a recent meeting of the committee in charge of the program it was decided that the events would be divided into two classes, instructive and spectacular. On one day the practicality of motor cars will be shown, and on the other the lovers of exciting sport will be given the kind of races they like.

One of the novelties will be an Australian pursuit race, divided into two heats, one for ordinary touring cars and the other for cars stripped for racing purposes. There will also be a long-distance race, probably over a distance between 20 and 30 miles. This race will be exclusively for touring cars carrying at least two passengers and a dead weight equal to the average weight of two persons if there are not more than two people in the car.

Officials will keep track of the amount of gasoline consumed in this race, which will enable some interesting figuring. It is open to gasoline and steam vehicles.

There will be several match races, and much interest is already centered upon the event in which the Pope-Toledo and the White cars will meet. A perpetual challenge cup race will also be arranged. Clubs only are allowed to challenge for this event.

## YONKERS MEET ASSURED

New York, May 17—It has been finally determined by the Empire City track management to run a race meet at the Yonkers record-breaking course on Saturday, June 4. The delay in making formal announcement has arisen from the uncertainty Secretary Reeves has encountered in securing a star attraction, without which this experienced showman did not care to undertake the promotion of a meet. The doubt as to whether Orfield, the chief metro-



SYRACUSE MOTORISTS' ONE GOOD ROAD

politan favorite, would go ahead for the international cup race or remain in this country for the track circuit, had much to do with the uncertainty of running the meet. Lately, however, the possibility of securing other star attractions has increased and decided the Empire management to go ahead. The feature match of the day will be announced later.

The program of open events announced is as follows, the new international classification being employed:

First Event—Fifteen-mile free for all—For machines of any motive power, from 1,432 to 2,294 pounds.

Second Event—Ten-mile race—For machines of any motive power, from 881 to 1,432 pounds.

Third Event—Two-mile race—For machines of any motive power, from 551 to 881 pounds.

Fourth event—Five-mile. Great Empire Handicap—For machines of any motive power and weight. The handicapping is to be done by E. T. Hirshall and A. L. Riker, the technical committee of the racing board.

In each event the prizes will be silver trophies of the value of \$100 for first and \$50 for second.

## BOASTS ONE GOOD ROAD

Small Stretch Near Syracuse Only  
a Sample of What Is Possible  
All Over the Country

Syracuse, N. Y., May 15—The completion of half a mile of as perfect macadam road as was ever built in Onondaga county is the signal for much enthusiasm on the part of the residents of Salt Springs avenue, which extends from East Genesee street, or the Fayetteville toll road, east to Hendson's in Dewitt, and has a fork to the right connecting with the toll road. With this exception the roads in Onondaga county and central and northern New York were never worse.

Some time ago Dewitt voted the tax system of caring for the public highways, and the work in district 14, under the direction of Commissioner Bogardus, of Medina Springs, is one of the best illustrations of the feasibility of the system. The new stone road has been carefully built and is hard, smooth and broad. It is already attracting attention on the part of Syracuse people who drive their automobiles in the country frequently during the summer season. Yesterday afternoon the new road presented an animated scene, many fine turnouts from the city being in evidence. East over this road to Hendson's and returning through James street makes a popular short distance drive.

For 19 years Pierce W. Hall, a prosperous farmer on the Salt Springs road, served as pathmaster. He took pride in the condition of the road and he required every taxpayer in the district to work out his tax in a thoroughly business like way. Sometimes the residents along the road complained because of his strict method, but it resulted in laying a foundation that was far above the average of country roads, and when it came to building the macadam road it was accomplished with good results. The road is about 2½ miles long, and the plan is to macadamize more of it as soon as it is possible to secure the crushed stone.

Along this thoroughfare there are many handsome country residences and well-kept farms. Former Senator Frank Hiscock, William K. Niver, Dr. H. D. Didama and Alexander McCall, former chief of police, among the property owners. Pierce W. Hall has one of the largest and most attractive places, and the home of Arthur B. Morse, ad joining the Niver property attracts attention because of its well-kept condition, spacious lawn and fruit orchard.

## BIGGEST PARADE IN WEST

Chicago, May 17—Next Saturday's automobile parade arranged by the Chicago Automobile Club will start from the vicinity of the club house at 2:30 p. m., rain or shine. Four present indications it will be the greatest parade of automobiles that has yet been attempted in the west.

There will be five divisions, which have been arranged as follows: First division, American and foreign touring cars, Jerome A. Ellis, marshal; second division, light gasoline cars, Andrew J. McDuffie, marshal; third division, steam cars, Henry J. Uhlman, marshal; fourth division, electric vehicles, W. E. Masun, marshal; fifth division, commercial vehicles, J. B. Burdette, marshal.

The route of the parade will be north on Michigan avenue to Jackson boulevard; west

on Jackson boulevard to Ashland avenue, where a turn will be made to get back on to Jackson boulevard. When Michigan avenue will have been reached the parade will south on Michigan avenue to Twenty-second street, where it will turn back on Michigan, going to the club house to disband.

Mayor Harrison and Chief of Police O'Neill will be guests of President Farson during the parade and ride with him in his car. All the members of the club have been urgently requested to participate and induce their friends, owners of automobiles, to join in the manifestation.

A luncheon will be served to the participating members and the guests of the club after the run.

## MOTORING COUNCILMEN

Syracuse, N. Y., May 17—Mayor Alau C. Forbes has arranged a novel outing for the fifteen members of the common council and the heads of the city departments, who will be his guests Thursday afternoon and evening. The mayor will tender his guests an automobile ride to South bay and dinner at Crown-hart's inn. He has engaged ten touring cars for the party, which will number about thirty-five. The start will be made from the city hall at 4 o'clock in the afternoon and the return in time to get copy in for next week's edition.

W. J. Beattie and J. C. Madigan, of Cohoes, stopped in Syracuse for dinner Saturday while on their way from Albany to Buffalo on a pleasure trip. They left Albany Friday afternoon and spent Friday night at Utica. The roads between Utica and Syracuse they reported were in a deplorable condition and considered themselves fortunate that their machine stood the test. The men rode in a 24-horsepower Thomas Flyer. The roads between Albany and Utica are in fairly good condition and that distance was covered in 6 hours. Messrs. Beattie and Madigan left here at 2 o'clock in the afternoon, spent the night at Rochester and resumed their journey to Buffalo the next morning.

Hullert W. Smith, chairman of the New York division of the tour committee, has appointed his assistants as follows: R. M. Robinson and J. K. Taylor, of Albany; H. B. Mandy, of Utica; R. W. Whipple, of Binghamton; Lee Richmond, J. J. Manley, Thomas J. Borhway, and Robert J. Thompson, of Rochester, and J. B. Eccleston, of Buffalo. The Yates hotel has been designated as the headquarters for the tourists the night they spend in Syracuse. Plans for their entertainment on that occasion will be made within a few days.

Secretary-Treasurer Frederick H. Elliott, of this city, has taken headquarters in the University block.

## KIPLING CHIEF QUEST

### Capetown Club Holds Banquet in Honor of the British Author, Who Talks on Motoring

Cape Town, South Africa, April 14—Rudyard Kipling, the poet, the prose writer, the story teller, was among the guests at the second annual dinner of the Automobile Club of South Africa. While there were many other prominent people present the man from England attracted the greatest interest and was in fine humor. A. T. Hennessy, president of the club, presided, and among those present were: T. J. O'Reilly, ex-mayor of Cape Town; Colonel Crewe, colonial secretary; W. Thorne, mayor of Cape Town; D. P. de Villier Graaf, vice-chairman; Commander Clinton Baker of the battleship Gibraltar.

In his address on "Our Guests," Vice-Chairman Graaf said among other things: "When motoring was first introduced into Great Britain it was thought necessary that legislation should be introduced against it. One of the acts passed was to the effect that no motor was allowed to go through the streets unless it was preceded by somebody carrying a red flag. As a result of this and other annoying decisions, motoring was taken over in France, where it was given a friendly reception and flourished. It was not only used for recreation and quick traveling, but for agricultural purposes as well, and it caused the mother country to look the question in the face and relax the existing restrictions, which killed the industry there for the time being."

Mr. Kipling combined anecdotes with serious talk, but the former were what the club members desired to hear. "Motoring is not in its infancy, but has reached the middle age. I knew the child, although I was not present at its birth, but I helped to nurse the rickety thing along. The men who deserve a statue, the men who deserve the consideration, love and affection of their fellow men, are the men—maniacs, as they called them and occasionally call them—who years ago

laid their right shoulders to the wheel and pushed the whole thing along."

The president of the club said in his address that the object of the Automobile Club of South Africa is to help the advancement of automobilism in South Africa. The club, which was organized in 1902 by six motorists and has now a membership of fifty-six. The drivers of motor cars in the colony are not hampered by any stringent laws and they have so far been very careful and made friends by their correct behavior. No doubt they would always keep in mind that there are other people using the roads and that while their pleasure may be to drive fast, they may do so under proper management and judgment. The members of the club are working together with the authorities, from whom they receive every possible encouragement.

The next meeting of the club promises to be interesting, several members having agreed to talk about different subjects concerning the manufacture and running of an automobile.

## TOUR PREPARATIONS

New York, May 16—During the past week a large number of requests for information and entry blanks have come to the touring committee of the A. A. A., many of them being from western cities. In addition to the requests from individuals, many of the clubs and manufacturers have asked for a supply of the entry blanks and books for distribution among their members and customers. Nearly 4,000 of these books have been distributed, which shows the immense interest that is being taken in the tour to the world's fair.

Frank X. Mudd, the chairman of the Chicago committee, reports that he is gathering much information regarding western routes, and that great interest in the tour is being expressed in Minneapolis and St. Paul, as well as in other cities near Chicago. He reports that from present indications there will be fully 300 automobiles entered from his territory, in addition to the large number that will reach Chicago from the east.

Charles J. Glidden, the chairman of the Boston committee, who at present is abroad, will return in June and take up the active work of organizing the New England division. Mr. Glidden will start his tour of the world by going from New York to St. Louis with the run and from there to San Francisco.

A report from G. E. Varney, secretary of the Indianapolis, Ind., Automobile Club, states that there is much local enthusiasm there over the tour. Mr. Varney believes that the national highway, which runs through Indianapolis direct to St. Louis, is by far the best route for the eastern tourists on account of its directness and almost uniformly good roads.

## Official Awards by the A. C. A. for the Service Test of Commercial Cars April 4 to 9

Full Report of Committee to Be Published by the A. C. A. Later

FIRST CLASS—TO CARRY 1,000 POUNDS OR UNDER

No.	Maker	Description	Award
7	Olds Motor Works	Gasoline Delivery Wagon	Gold Medal
8	Olds Motor Works	Gasoline Delivery Wagon	Gold Medal
4	Knox Automobile Co.	Gasoline Delivery Wagon	Bronze Medal

SECOND CLASS—A—TO CARRY 1,000 TO 2,000 POUNDS

12	Pope Motor Car Co.	Electric Delivery Wagon	Gold Medal
5	Knox Automobile Co.	Gasoline Delivery Wagon	Silver Medal
11	Pope Motor Car Co.	Electric Delivery Wagon	Bronze Medal

SECOND CLASS—B—TO CARRY 1,000 TO 2,000 POUNDS

16	Cantano Electric Traction Co.	Electric Delivery Wagon	Gold Medal
14	Electric Vehicle Co.	Electric Delivery Wagon	Silver Medal
2	Charles Rockliff	Gasoline Delivery Wagon	Bronze Medal

THIRD CLASS—TO CARRY 2,000 TO 3,000 POUNDS

6	Consolidated Motor Co.	Gasoline Delivery Wagon	Gold Medal
8	Knox Automobile Co.	Gasoline Delivery Wagon	Silver Medal

FOURTH CLASS—TO CARRY 3,000 TO 4,000 POUNDS

3	Union Motor Truck Co.	Gasoline Stake Truck	Gold Medal
---	-----------------------	----------------------	------------

FIFTH CLASS—TO CARRY 4,000 TO 5,000 POUNDS

15	Electric Vehicle Co.	Electric Truck	Gold Medal
----	----------------------	----------------	------------

SIXTH CLASS—TO CARRY 5,000 TO 10,000 POUNDS

17	Fischer Motor Vehicle Co.	Gasoline Electric Truck	Gold Medal
----	---------------------------	-------------------------	------------

## AFFAIRS OF THE CLUBS



THE WOODHAMPTON AUTOMOBILE CLUB, OF ENGLAND, ON PARADE

**Talk and Smoke**—There is a meeting of the Chicago Automobile Club Thursday of this week. After the regular business is attended to there is an informal entertainment and smoke.

**Bulawayoans in Line**—Automobile Club of Rhodesia is the name given to the club recently formed by a dozen motorists of Bulawayo, South Africa. B. H. Laidman was elected president.

**Misourians Want a Home**—At a meeting of the Automobile Club of Kansas City, held in Kansas City, Mo., last week, it was decided to build a permanent club house. A constitution and by-laws were adopted but no officers were elected. The next meeting will take place June 9.

**Ready to Hustle**—A meeting of the newly elected board of governors of the New Jersey Automobile and Motor Club was held last Monday night at Newark, N. J., for the purpose of organizing and selecting committees. The following committees were appointed: Membership, William De Mars, Clarence Beach and J. H. Dawson; legal, Dr. H. C. Harris, R. C. Jenkinson and Horace P. Cooke; house, J. H. Dawson, F. N. Fiske, Charles W. Outhunt, Dr. Clement Morris and Edward Zuel; auditing, James Close, F. W. T. Stiles and Ernest Hoerger. The next meeting of the club will be held Monday evening, May 23, when it is expected that a speaker will address the members on some subject of interest to automobilists.

**Honor the President**—Last Saturday's club run by members of the Chicago Automobile Club of Chicago, was the most successful one of the three which have been held this season. The rendezvous was set for 2:30 in the afternoon and when the start was made about twenty cars were in line. President John Furson's home in Oak Park was the destination of the caravan and as an appropriate emblem for the occasion everyone in the party wore something red, from a bright red rose to a red necktie, not forgetting a few reddish socks. It is quite possible that if the weather had been a trifle warmer some of the ladies would also have had red parasols. On the route one could hear very plainly people make remarks about the "red devil." President Furson must have felt deeply touched at this outburst of red. Among the forty to fifty members in the party there were: Corporation Counsel and Mrs. Granville Browning, W. W. Tracy, John D. Bangs and Harry G. Foreman, respectively presidents of the boards of commissioners of the Lincoln, West and South Parks.

**Syracuse Club Grows**—Fifteen applications for membership will be acted upon by the Automobile Club of Syracuse, Syracuse, N. Y., at its meeting next week. The club now has a membership of seventy-seven and before the season really opens the officers say this number will be increased to a hundred, making the third largest in the state. President W. L. Brown has named the following committees: Membership—Forman Wilkins, William S. Dunning and Theodore A. Young; exhibitions, contests, runs and tours—C. A. Benjamin, H. W. Smith and F. H. Elliott; laws and ordinances—Henry Walters, Wilbert L. Smith and Giles H. Stilwell; good roads—George S. Larrabee, Lyman C. Smith; entertainment—H. C. Pierce, Carl L. Amos and H. W. Chmela.

**Race for \$1,100**—The Indianapolis Automobile Club, of Indianapolis, Ind., is arranging a race meeting to be run at the fair grounds on Decoration day. The principal event will be a professional race for which it is claimed that a purse of \$1,100 has already been subscribed. The distance of this race will be 5 miles. The club's share in the prize is \$500 and as three entries have already been received at a fee of \$200 each, it is expected that this race alone will be worth while coming miles to see on account of the fight for the money. There will be other professional events in which the participation of Barney Oldfield, Tom Cooper and others is expected. There will also be five 3-mile races for amateurs and a challenge cup race.

**Bridgeport on Parade**—May 30, the Automobile Club of Bridgeport will show Bridgeport, Conn., how many automobiles it has. On that day there will be an opening of the season parade of the club members and their friends. The parade will start at 9:30 in the morning and at noon the party will assemble for dinner. Gasoline touring cars will lead the procession; then will come gasoline runabouts and then steamers. DeVer H. Warner will be grand marshal and A. K. L. Watson will conduct the steamer division. The Bridgeport club at its annual meeting last week elected the following officers: President, F. W. Boland; vice-president, F. L. Hitchcock; secretary, Dr. Dow R. Beebe; treasurer, Frank T. Staples.

**Parade and Races**—May 30 has been selected by the Worcester Automobile Club, of Worcester, Mass., for the purpose of holding its first race meet and street parade. Merchandise prizes will be given to the winners at the different events.

**Will Tour Europe**—George H. Flinn, president of the Automobile Club of Pittsburgh, Pa., has bought a 40-horsepower machine to be delivered in Europe. Mr. and Mrs. Flinn and Mr. and Mrs. F. H. Lloyd will sail in about 2 weeks for Hamburg and will tour to Hamburg, to the cup race. After the race the party will make an extensive tour of France.

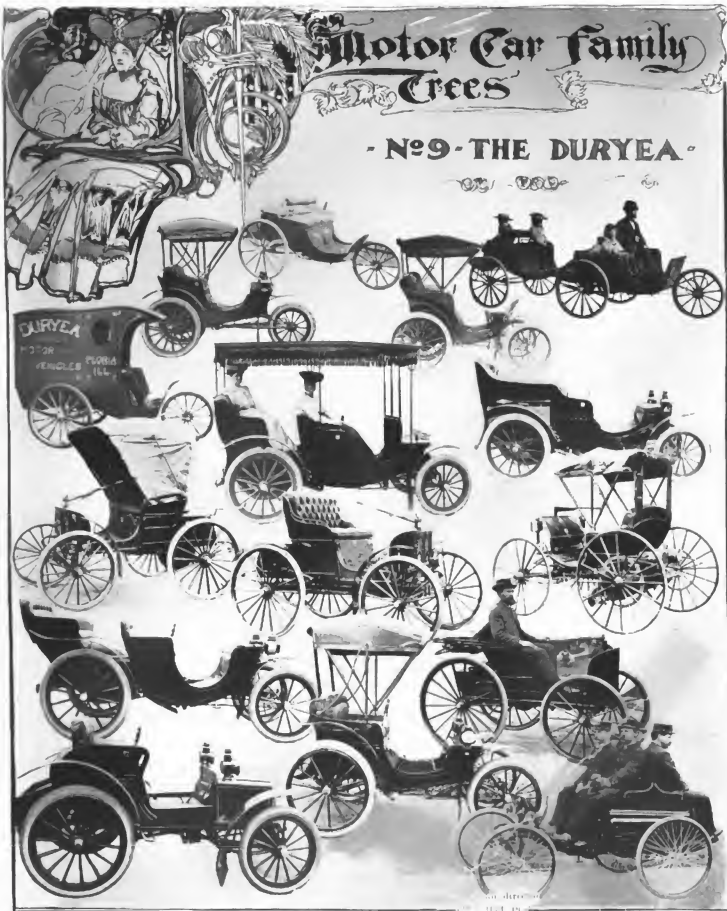
**Where Was Moses?**—Fifteen members of the Aurora Automobile Club, Aurora, Ill., and two motor cyclists went on a run last week. It is reported that at a certain moment all the lights went out, and that as the roads were pitch dark the party did not dare drive further. Some of the motorists went to nearby farm houses and secured lanterns which enabled them to get back to town after a delay and at a 2-mile speed.

**Lamb-like in Rockford**—The first automobile parade arranged by the Rockford Automobile Club, Rockford, Ill., was held last week and was one of the grandest affairs ever witnessed in the Illinois town. Large crowds of citizens and many from nearby villages had gone to see the display. Twenty-three automobiles, of which nine were touring cars, took part in the crawl and demonstrated that motor cars are as tame as lambs.

**Wolverines in Big Tour**—At a meeting of the Grand Rapids Automobile Club, held last Monday in Grand Rapids, Mich., the following officers were elected: President, Dr. Perry Schurtz; vice-president, A. A. Barber; secretary, L. W. Welch; treasurer, N. Fred Avery; chairman of the touring committee, L. W. Welch. The board of directors is composed of the officers, Dr. Henry Hulst, C. A. Luce and Dr. E. H. Eddy. The club is planning to take part in the excursion to St. Louis and most of the members have expressed their willingness to join in the run.

**Aldermen Convinced**—Four members of the city council of Wichita, Kan., were taken out last week for a demonstration ride by the Automobile Club of Wichita. The members of this organization wanted to demonstrate to the aldermen that the recently adopted speed limit of 6 miles an hour was not only unreasonable but almost impracticable. After the drive all four members expressed their opinion that the law was wrong and promised to induce their fellow councilmen to change the ordinance. Two of the party said they thought the limit ought not to be less than 10 miles or more than 12. The chief of police, who was also a guest, said that 8 miles should be allowed in the business district and from 12 to 15 miles in the parks and outside the city limits.





# Motor Car Family

## Crees

- No 9 - THE DURYEA -

Three-Wheeler 1902  
Delivery Wagon 1899  
Phaeton 1896  
Surrey 1901  
Phaeton 1904

Does-dos 1906  
Surrey 1903  
Phaeton 1901  
It is expected  
at competitions and  
the reports of the expert  
judges are highly interesting.

ap and Trailer 1898  
Tenneau 1902  
The First One 1892  
Phaeton 1892  
Does-dos 1907

Besides the leading manufacturers from

facilities is respon



## THE OLD STORY RETOLD

### Speakers at International Good Roads Convention at St. Louis Proclaim the Great Necessity

St. Louis, Mo., May 17.—The national and international good roads convention was opened yesterday in music hall at the world's fair grounds. About 200 delegates representing thirty-eight states, two territories and several foreign countries were present at the opening session, and before the convention is done with its work, delegates from at least five other European countries will have joined it.

Several interesting addresses were made, and the enthusiasm with which the speakers were greeted and the round of applause which they received at the conclusion of their speeches indicated the sincere interest which those present were taking in this movement.

"The necessity for better roadways is apparent," said Governor A. M. Dockery of Missouri, in the course of his address. "The establishment of such a system is the missing link in the chain of our transportation facilities. By the aid of steam and electricity great lines of communication and interchange have been established, reaching out to every section of our country. The transportation problem, in so far as it relates to steam and electricity as motive powers, has been solved. The problem for this convention to consider is the means by which better highways may be constructed to enable the products of our industries to easily reach the great lines of transportation now in operation."

The president of the Merchants' Exchange of St. Louis, Henry H. Wernse, took for his subject "The Commercial Advantages of Good Roads." He said that the good roads movement ought to receive the support of the church and that preachers should take it as their subject when addressing their congregations or when giving lectures. The European highways, according to Mr. Wernse, are in an excellent condition and the governments of Europe favor any movement having for its object the improvement of the roads. In several countries they have been the means of attracting many tourists who would probably have never come or returned were it not for the fine road systems.

President W. H. Moore, of the National Good Roads Association, said he was glad to notice that the press of the country and the railroads were giving their support to the good roads movement. He suggested that there should be a state highway commission and that competent engineers should be employed for the improvement work. Furthermore, he said, convicts and vagrants ought to be put to work on the roads where they could render themselves much more useful than by being kept at work in jail.

Several prominent advocates of the road system were to speak yesterday, but only one was heard until later in the week. Among them were James Wilson, secretary of agriculture, President D. R. Francis, of the Louisiana State exposition and Mayor Wells of St. Louis.

The principal addresses will be made during the main days of the convention.

Martin Dodge, director of inquiries—Educational and Ex-

of the Government Division; R. W. Richardson, secretary National Good Roads Association—National and State Agitation for Permanent Highways; Professor Ira O. Baker, University of Illinois—Road Improvements in the Mississippi Valley; Santiago Mendez, C. E., representative of the Mexican Government—The Highways of Mexico; T. G. Harper, president Iowa Good Roads Association—State Aid; Lewis M. Haupt, C. E.—Proper Construction; Augustus Post—Overland in an Automobile from New York to St. Louis; William Richardson, member of congress—Road Improvements in the South; J. M. Lloyd, member of congress—Missouri Roads; J. C. Clair, industrial commissioner Illinois Central railroad—Improved Roads in the Industrial Department; M. V. Richards, land and industrial commissioner Southern railway—The Influence and Value of Good Road Trains; A. Bermudez, special commissioner from Nicaragua to the world's fair—Road Necessity of My Country; H. G. Myers, Arkansas—The Traveller and the Roads; S. Eugene de Rackin, Manila—Roads in our Insular Possessions; Frederick B. Parker, New York—The Use of Tar in Road Making; Ira W. Sylvester—What Can be Done.

### SUIT OVER TRADE DEAL

Syracuse, N. Y., May 17.—An action has been brought in the municipal court by Paul Norwood against the R. M. Cornwell Co., dealer in automobiles, in which breach of contract is alleged by the plaintiff. The answer has not been filed but the complainant alleges that on April 21 he entered into a contract with the defendant, whereby he was to exchange his 1902 Oldsmobile and \$100 in cash for a two-cylinder Pope-Toledo, 1903 pattern. Mr. Norwood says he paid the money and shipped his Olds to Syracuse, but frequent demands for his Pope-Toledo have brought forth no fruit. He demands judgment in the sum of \$800.

Dealers in automobiles here have done a thriving business thus far this year, no fewer than thirty new cars having been purchased and there are as many more orders unfilled. It is predicted that 200 cars will be owned here by fall.

The Syracuse Automobile Co. has established a charging plant for electric. The company is selling motor boats and Barknobs. Manager Delong has a number of the latter in his show rooms and has found customers for a number of 15-horsepower machines.

The firm of Moore & Richards has been organized and has begun the manufacture of marine engines at 300 West Willow street. The engines are of a new design perfected by Mr. Moore, who is a machinist of long experience.

### TRADE ON THE COAST

San Francisco, Cal., May 10.—The West Coast Motor Car Co. has moved to its new quarters at 604 Van Ness avenue. When entirely completed the new store will be one of the finest in the city. This concern has the agency for Pacific Coast for the Autocar and

the Rambler Automobile from his eastern trip. He tried to had originated were

## PLAN ACTIVE CAMPAIGN

### Minneapolis Dealers Arranging for A Number of Business-Getting Automobile Events

Minneapolis, Minn., May 16.—The activities of the Minneapolis Automobile Dealers' Association, which was organized early in February, will become evident next week, when the first of a series of summer events will occur. Saturday evening, May 28, an automobile parade, which is expected to be the greatest thing of its kind ever attempted here, will open the automobile season in Minneapolis.

The parade will be the result of the united efforts of the dealers' association and the Minneapolis Automobile Club. The latter organization, however, will simply be asked to co-operate with the dealers. The club has been anything but an active organization since its beginning. An attempt at a meeting at the Commercial Club last week resulted in no quorum.

In addition to the hundred or so of private cars which will be in line, near a hundred cars will be furnished by the dealers. Every dealer will turn out everything on wheels that he has in his establishment, and several of them expect to have fully twenty cars in line. A. F. Chase, W. H. Wheeler and Willis Walker are the committee having charge of the arrangements.

No attempt will be made toward having flower decorations or other fancy arrangements. The procession will be simply to show cars, and the interest which the entire city has shown in the automobile this year is evidence that it will be a greater drawing card than a circus parade.

Following the parade, regular events will be instituted, to be held every two weeks. The next event will undoubtedly be a hill-climbing contest, probably on Kenwood hill, where the successful contest was held last year. The climbing contest last summer was one of the best features of the year. It was considered of much more practical value than any of the races or other show events that were held. This year the great number of new high power machines in the city will add considerable interest to a climbing contest.

The demonstrating cars have been running out Kenwood boulevard and over the hill during the past few days under very adverse circumstances. Regular cloudbursts of rain have made the soft roads worse, and dealers have considered it a severe test of a machine to run it out through this part of the park system. Not a day has been missed by the demonstrators, however, as enough cars cannot be brought to Minneapolis to take care of the prospective purchasers who want "to be shown."

Other big events are being scheduled by the automobile men, although plans for them are still unsettled. Club runs will undoubtedly be held frequently, at least one a month, and the co-operation of the automobile club is expected to make these a success. At present nothing definite has been determined upon, but it is intimated that original features will be introduced to make the events especially interesting.

A big race meet is assured. Plans for this have been broached at several recent meetings of the dealers, but they have decided not to do anything for several weeks, or until the rush for cars slackens up enough to give them time to think. The meet this year will be on

on a different basis from others held here. It will be run as a regular race meet, and one or two of the big guns of the racing world, with some of the machines which they have made famous, will be imported for the occasion. The meet will probably not be held until late in the season.

Dr. C. De Glarno Gray, who is something of a promoter in the way of shows and meets, did not meet with the warmest kind of a reception in Minneapolis. He spoke before the dealers' association, at the meeting last week, but the dealers did not grow enthusiastic over his plans for an outdoor show. The Minneapolis dealers expressed themselves as confident that they could manage their own exhibition if they wished to give one. It is possible that a regular outdoor show will be held at some time during the summer.

#### FACTORY FOR NASHVILLE

Nashville, Tenn., May 17.—Negotiations are now pending which may result in the building of a large automobile factory in Nashville. Northern capitalists have been in communication with the local chamber of commerce and with owners of desirable sites with a view of securing land on which to build their factory. It is hoped that they will decide on this city as the location for their plant. It is said

## BIG AUSTRIAN EXHIBIT

### All Well-Known Continental Concerns Make Splendid Displays of Automobiles and Parts

Vienna, Austria, May 3.—The fourth annual Austrian international automobile and motorcycle exhibition was dedicated during the latter part of April by Archduke Franz Ferdinand, and delegates from all the countries which take part in the exhibition were present. The great halls of the Prater, where the show is held,

many large and small countries there are delegations from the German and French army, from German and French ministers and automobile clubs and many scientists interested in matters relating to alcohol.

The following is a partial list of the principal exhibiting concerns: France—Panhard & Levassor, Mors, A. Darracq & Co., Calceci, Renault, de Dion-Bouton, Deauville, Gardner-Serpellet, Charron-Girardot-Vogt, Brouhot, Peugeot, Clement, Gobron-Brillie, Krieger, Langemann, Tomy Huber, Germany—Benz, Stoeber Neue Automobile Gesellschaft, Maurer-Union, Durkopp & Co., Adler & Co., Berliner



PARADE OF COMMERCIAL VEHICLES IN LONDON

Motorwagenfabrik Truppelhof, Schneider Automobil-Industrie, Austria—Jach Lohner & Co., Arnold Spitz & Co., Bierenz & Co., August Braun & Co., Beck & Hollender, Oesterreichische Daimler Motoren Gesellschaft, Johann Puch, Laurin-Clement, Nesselhoffer Wagenbau-fabrikgesellschaft, Italy is well represented by the Fiat company, which has one of the most extensive and interesting displays. Besides these there are a great many exhibitors of apparatuses.



WHERE THE VIENNA SHOW WAS HELD

that the company behind the enterprise has a capital stock of \$250,000.

Local dealers are still hampered in their efforts to do business. The fact that they have been unable to secure any machines to sell. The only 1904 machines which have been received are a car load of Ramblers and one tourist buckboard, all of which have been sold.

John W. Chester has a car load of Olds on the road, all of which have been sold. Duncan Dorris has been promised a shipment of St. Louis cars on June 15, one of which he has sold, and a shipment of Orientals, of which he has also sold one. The Nashville Auto Co., which handles the Cadillacs, has the promise of a shipment before the end of this month and several of the machines which will come at that time have been sold. The Southern Electric Co. is waiting patiently for more Ramblers and the Southern Automobile Co., which handles the White exclusively, has already sold one car more than it has in stock.

The Cumberland Telephone Co. is going to make its second experiment in the use of automobiles as emergency wagons and has put in an order for two Orient buckboards to carry the repairmen about the city and surrounding country.

were found too small this year to contain all the exhibits and some are shown in the garden under a tent especially put up for the purpose.

Continental papers, those of Paris especially, claim that it is the greatest show ever held on the continent, excepting the annual salon. As a matter of fact, while there are not so many exhibitors as at Paris and London, all of the important French, German, Austrian and Belgian manufacturers have displayed their goods. For the first time in the history of the automobile trade the German, and especially the Austrian makers, have come in full force and their showing is a revelation.

The principal reason of the success of this show lays in the fact that it received ample government support and that in the foreign countries which are represented the government also gave large bonuses to make the national display a worthy one. It is expected that after the many competitions and tests have been ended the reports of the expert commission will be highly interesting and instructive.

Besides the leading manufacturers from

#### COMPLAIN OF FREIGHT DELAYS

Washington, D. C., May 14.—These are the days that bring joy to the hearts of the automobile fraternity in Washington. Weather conditions so far this month have been ideal and as a result the various salesrooms have been invaded by prospective customers. All along the line the report is that orders are coming in with a degree of regularity that is most encouraging.

There is a general complaint by the automobile dealers against the abnormal delay in freight shipments to this city. According to the dealers automobiles coming as freight from all directions are seriously delayed. Machines that in the ordinary course of travel should arrive in Washington within a week or ten days after being loaded on the cars at the point of shipment do not arrive here until 2 or 3 and even sometimes 4 weeks later. Supply houses are also having this same trouble, as indeed are business men in many other lines of trade. Railroad officials claim that the work incident to the construction of the new terminal facilities is responsible part for the delay.

# THE READERS' CLEARING HOUSE

## HIGH AND LOW COMPRESSION

Hartford, Conn.—Editor *MOTOR AGE*—Why are two cam shafts required for low compression motors, while but one is used on high compression motors? What are the advantages and disadvantages, respectively, of high and low compression motors? Which is better for a motor cycle engine, a long or a short inlet pipe from the carburetor, and why? Which is the better, a double chain or a bevel gear and propeller shaft drive? What per centage of the power of the motor is delivered to the wheel of a belt driven motor bicycle and what per centage in a chain driven one? How is the speed gearing of a chain driven motor bicycle determined? How is that of a belt driven machine determined? Could a motor bicycle be driven successfully by a bevel gear system? Is an enclosed or an outside fly wheel better on a motor bicycle? What is the best disposition of the motor? Is a long belt better than a short belt in a belt driven motor cycle?—J. J. O'CONNOR.

High or low compression does not regulate the number of cam shafts. When mechanically operated inlets are used, it usually requires two cam shafts, although a few designers operate both valves from the same cam, using a direct push on one valve and operating through a bell-crank to the other. If the valves are both on the same side of the cylinder the cams are keyed to the same shaft. Where the inlet valve is on one side of the cylinder and the exhaust on the other, it is necessary to have a cam shaft for each valve. The low compression motor is more easily cooled, can be run at a lower speed and produces less power per volume than one of high compression. The high compression motor is subject to more severe strains. The disadvantages of each are numerous when the design for the particular duty has not been considered. Properly designed they have no inherent faults, and the selection of either depends upon its adaptability. Short inlet pipes are better. The cylinder is a pump on the suction stroke and draws from the carburetor opening. The tendency of that body of air is to remain at rest. When motion is produced there is friction against the pipe. The vacuum produced by a pump depends upon the ratio between the piston displacement and the total volume of the chamber where the stroke is complete; which, for a maximum, would have to be unity. Assume a 4 by 4-inch motor with a 1½-inch inlet pipe 30 feet long and a carburetor at the end. If carburation were perfect and the gas did not condense, the motor would operate at low speeds, but at high speeds the vacuum, so slight on account of the large volume in the pipe, would not be sufficient to move the body of gas due to the resistance of its own inertia and the friction against the walls. There are arguments for and against both double chain and bevel gear drives. There will be no appreciable difference in the efficiency of a chain, or a belt driven motor bicycle under favorable conditions. Let  $X$  equal the speed of the motor in revolutions

per minute;  $V$  the speed of the rear wheel in revolutions per minute;  $L$  the diameter of motor pulley or teeth in the sprockets; and  $M$  the diameter of the rear pulley or teeth in the sprocket, then

$$X = \frac{N \times L}{M}$$

Then  $X$  multiplied by the circumference of the rear wheel in feet will give the number of feet traversed by the rear wheel in 1 minute. This multiplied by sixty and divided by 5280 will give the speed in miles per hour corresponding to a speed  $X$  of the motor. A bevel gear motor bicycle is manufactured and is a success. The construction is expensive, however. The inside fly wheel is desirable. The disposition of the motor can best be discussed by the various manufacturers who claim advantages for their particular designs. No standard has been set and many different dispositions have proven practical. A long belt is preferable to a short one.

## ALUMINUM SHRINKAGE

Providence, R. I.—Editor *MOTOR AGE*—In a recent issue *MOTOR AGE* stated that ¼-inch per foot should be allowed for shrinkage in aluminum castings. Kent gives the shrinkage as 3.16-inch per foot and I have seen it given by others as high as 17.64-inch per foot. Which is correct?—SANDFORD A. POTTER.

It is safe to allow ¼-inch per foot for shrinkage of aluminum. This will vary with the amount of zinc or other alloy, the temperature at which the metal is poured, the size of the casting, the temperature at which it is removed from the flask, and whether the sand is green or baked. No rule can be given for the shrinkage, but it will be found that ¼ to 9/64-inch will be generally correct.

## MOTOR DISPOSITION

Allegheny, Pa.—Editor *MOTOR AGE*—What is the best way to place a single-cylinder motor with clutch and speed changing gears, all to be close to the rear axle?—G. F. DILLON.

In designing the car do not attempt to place the motor and transmission too close to the rear axle. If using a chain drive it will be found that the short chain will give trouble, and if a bevel gear drive is used the angularity of the shaft will be excessive. If the correspondent will state whether the motor is vertical or horizontal, and the type of drive it is intended to adopt, *MOTOR AGE* will be pleased to reply to the question.

## MOTOR HORSEPOWER

Winfield, Kan.—Editor *MOTOR AGE*—Will you kindly tell me what power a four-cylinder motor of 3½-inch bore and 4½-inch stroke will develop?—J. S. SEIMERS.

If the motor is properly constructed it should develop 14 horsepower at 1,000 revolutions per minute.

Selby, S. Dak.—Editor *MOTOR AGE*—What horsepower should a four-cylinder motor of 2½-inch bore and stroke develop at 1,400 revolutions? Would a fly wheel 14 inches in diameter and of 30 pounds rim weight be sufficient for this motor? By placing the motor crosswise of

the car frame and in front would a fan be needed to cool it?—W. S. HARRISBOUGH.

The motor will develop 6½ horsepower at that speed. The fly wheel is in good proportion. With proper radiating surface on the motor cylinder a fan is not essential, but is advisable if the machine is to be left standing any great length of time with engine running or to do hard pulling at a slow speed.

Detroit, Mich.—Editor *MOTOR AGE*—What power should be developed by a four-cylinder motor of 4½-inch bore and stroke running respectively at 900 and 1,000 revolutions per minute? Also what would a motor of 4½-inch bore and 4½-inch stroke develop at the same speeds?—E. S. GEORGE.

A four-cylinder motor 4½ by 4½ inches will develop 22-horsepower at 900 revolutions per minute, and 24-horsepower at 1,000 revolutions. The 4½ by 4½-inch motor will develop 19-horsepower at 900 revolutions per minute and 21-horsepower at 1,000 revolutions.

## FOUR-CYLINDER IGNITION

St. Paul, Minn.—Editor *MOTOR AGE*—Is it impossible to operate a four-cylinder motor with one spark coil? If this can be done successfully what is the system?—J. D. R.

It is quite practicable to operate four cylinders with one spark coil. This is done by interrupting the primary circuit as many times per revolution of the cam shaft as there are cylinders, and placing the interruptions 90 degrees apart. In a later issue a system for multiple-cylinder, single-coil ignition will be illustrated and described.

## HEAT RADIATION

Detroit, Mich.—What is the formula for computing the volume of free air necessary per minute to keep a given radiating surface at a given temperature, when the number of heat units to be carried off per minute is known?—E. C. RIGGARD.

$$\frac{e}{(T-T') \times .0086} = 13 = \text{cubic feet of air per minute.}$$

Where  $e$  is the British thermal units to be carried away per minute;  $T$ , the temperature of the radiating body;  $T'$ , the temperature of free air; 13, the cubic feet per pound of air at 60 degrees Fahrenheit; .0086, the British thermal units necessary to raise the temperature of 1 pound of air 1 degree Fahrenheit at 32 degrees Fahrenheit.

This formula will probably be close enough for the desired circulation, although it is only approximate.

## MOTOR COMPRESSION

Lowell, Mass.—Editor *MOTOR AGE*—In conversation with salesmen of several different machines I secured the information that the gauge pressure of compression of two different motors was 120 pounds while that of a third was but 50 pounds. How high can this compression be carried without causing premature ignition? What is the ratio between gauge pressure and ignition pressure? Supposing that in a motor the gauge pressure of compression were 75 pounds; what would be the pressure after ignition?—THOMAS McNAMARA.

The maximum compression, considering pre-ignition as the limit, is variable, depending upon the efficiency of the cooling system, the presence of sharp corners or projections in the combustion chamber, and the speed of the motor. High compression cannot be used on low speed motors unless the fuel is injected into the cylinder when compression is com-

ple. With a compression of 75 gauge pounds, the ignition pressure will be about 303 pounds gauge. MOTOR AGE will publish a diagram to determine the relation between compression and ignition pressure in its next issue.

#### EXPLOSIVE MIXTURE

Pittsburg, Pa.—Editor MOTOR AGE—Is there a formula for determining the correct proportions of air and gasoline to form a proper explosive mixture for gasoline motors? If so will you kindly publish it?—G. W. BOWEN.

Experiment has determined that one part of gasoline to 8,000 parts of air forms the most advantageous mixture. With the proportion of air 1,000 parts either way the mixture will not lose perceptibly in effectiveness.

#### STRENGTH OF VESSELS

New London, Conn.—Editor MOTOR AGE—Will a spherical vessel 1 foot in diameter stand as much pressure per square inch as one 2 feet in diameter made of the same material and of the same weight of wall?—B. S. C.

The thickness  $T$  of a sphere to withstand a pressure  $P$ , allowing a safe stress  $S$ , and having a diameter  $D$ , in inches, is

$$T = \frac{PD}{4S}$$

Hence the 2-foot sphere should have the shell two times as thick as the other.

#### COMPOUND STEAM ENGINES

Traverse City, Mich.—Editor MOTOR AGE—Is there a reliable concern which makes for automobiles a compound steam engine which may be changed to a simple engine instantly when such occasion as hard pulls makes such a change desirable?—D. W. STEWART.

The compounding of steam engines for automobile use has not shown sufficient economy to warrant its general adoption for small power. Some of the advertisers in the MOTOR AGE may be able to supply an engine of this kind.

#### COMPOUND MOTOR

Cleveland, O.—Editor MOTOR AGE—In a three-cylinder compound internal combustion motor in which the two outer cylinders are high pressure and the middle one a low pressure cylinder taking the exhaust of both of the others, would not the pressure on the high and low pressure cylinder pistons equalize, the back pressure on the ascending high-pressure cylinder piston being equal to the downward pressure on the piston in the low pressure cylinders?—W. J. ROSENBERG.

A motor constructed along these lines was exhibited recently, and has been described in MOTOR AGE. The manufacturers will probably be pleased to go into detail on the theory that evolved their design.

#### HOT AFTER THE F. A. M.

St. Louis, Mo.—Editor MOTOR AGE—I have noticed the published resolutions of the Federation of American Motorcyclists seeking to establish a 110-pound weight limit for motor bicycle competitions and am really surprised. I believe motor cyclists who are fair minded, and especially the manufacturers of the Hercules, Thomas, Mitchell, Orient and several other machines, should make a vigorous protest against the 110-pound limit. If the builders of light machines or their riders are afraid to compete against the larger ones, they should stay out. It would be a better plan by far to make a class for 100-pound machines, one for 150-pound machines and one for the big freaks.

The majority of machines in America which have established reputations exceed 110 pounds in weight. There is only one prominent machine in America today eligible to a race under the 110-pound limit, and that is the Thor or any of the machines on the American market using Thor parts and Thor engines, such as the Indian, Warwick, Reading and dozens of others. We might just as well say we will recognize no record unless made with the Aurora Automatic Machinery Co.'s motor cycle.

The resolutions also state that such a limit would put us on the same basis as Great Britain and France. I desire to protest this statement. It would not put us on the same basis, and we never can get on the same basis, because American machines are made for American people to ride on American roads, and the ordinary 110-pound machine is considered by thousands of riders to be impracticable for American roads, notwithstanding the fact that there are a great many riders who swear by the light machines.

The money and the business in motor cycles is not from racing freaks or racing men; it is from the man who buys for road work, and if we limit competition to 110-pound machines any man owning an ordinary moderate weight motor cycle such as the Orient or Mitchell is barred from competing. He cannot afford to buy one machine for the road and one machine for racing. It is an injustice to American manufacturers and to the American public to insist on a 110-pound weight limit for motor bicycles.

I am well aware there are several machines made in this country of less than 110 pounds, but they can never hope to compete with the Thor outfit, and it appears to me as if the F. A. M., of which I am a member as well as being on the competition committee, is trying to hand bouquets to some few manufacturers. The talk about encouraging a reduction of weight among manufacturers is all nonsense. The manufacturer has enough encouragement from the fact that he needs the money.—HARRY R. GERR.

Hampstead, N. H.—Editor MOTOR AGE—I would like to inquire through the columns of MOTOR AGE if all motor cyclists in this country agree with the American Federation of Motorcyclists in its resolutions in regard to American motor cycle records.

If 110 pounds is to be the limit in weight for speed and endurance tests on the road, I think there are some experienced riders who would rather be excused.

If motor cycles that exceed 110 pounds in weight are to become unpopular it is surely up to certain manufacturers to make radical changes in the design and construction of their machines. As motor cyclists we do not like to be using machines that are in the future to be looked upon as "abnormal" in power and construction and as such are unfit for practical usage." There are several manufacturers of motor cycles who are using a very popular motor that is rated at 1½ horsepower, as is known by many. Some of these machines weigh very nearly 125 pounds. There are other machines that weigh from 125 to 150 pounds that have proved to be practical for both business and pleasure.

Some have learned by experience that a certain amount of weight is necessary for comfort and safety. Plenty of power, too, is a nice thing to have, but it evidently has never occurred to some of us that the weight and power

in the machines that we liked was abnormal. Why should any regularly built motor cycle that has sufficient weight for comfort and safety, and power enough for all requirements, be considered "abnormal in power and construction and unfit for practical usage?"

I fail to see how such a rule or resolution can have a desirable influence on motor cycle design, construction and competition. A rule or resolution that will not admit to open competition any regularly built motor cycle of reasonable weight and power is unreasonable and unfair.

I do not see how we can be eligible to membership in the F. A. M. if we continue to use these "abnormal" machines. If I am wrong in my views in regard to this matter I would be pleased to hear from those who are better informed.—E. B. WOODARD.

#### GOOD FIELD IN AUSTRALIA

Information has come to the government at Washington to the effect that the great want of the Australian commonwealth is some cheap kind of oil motor for farm work and for the conveyance of supplies. In the back districts, where timber is scarce and coal an expensive luxury, oil engines, both fixed and portable, are rapidly coming into general use, and are preparing the way for the oil motor. It is a mistake to assume that Australian roads generally are unsuitable for motor traffic. It is only in places that they are so. When the bicycle was introduced into Australia the same objection was urged, but at present there are thousands of bicycles in every-day use in that country. Cheap motor cars, for goods or passengers, make it in enormous demand throughout the commonwealth, but at present the prices are prohibitive. These in use are almost exclusively of French or American make. At country railway stations, which are frequently situated at a considerable distance from the townships, motor omnibuses would prove a boon.

#### RECENT INCORPORATIONS

Cleveland, O.—The Euclid Avenue Automobile Co., capital \$25,000. Incorporators Wade McIlraith, E. V. Hopkins, Clyde Martin, J. W. Orndorf and Henry Orndorf.

Dayton, O.—The Dayton Rubber Co., capital stock \$25,000. To manufacture pneumatic puncture-proof and solid tires and rubber goods. Officers: O. F. Davidson, president; N. N. Ramsey, vice-president; W. S. Ruffman, secretary and sales manager; C. C. Hoover, treasurer; A. T. Halt, superintendent.

New York—Automobile Transportation Co., capital \$5,000. Directors E. G. Milne, Thomas Sinnott and Robert Blake.

Orange, N. J.—The Lansden Co., capital \$30,000. To manufacture and deal in automobiles and carriages. Incorporators David S. Lansden, John M. Lansden and James Cowden Meyers.

Pittsburg, Pa.—Iron City Vehicle Co., capital \$10,000. To manufacture, sell, buy and repair carriages, wagons and automobiles. Directors John A. Hawkins, George A. Urling, Harry W. Urling and Robert Y. McKinnon.

Columbia, C. S.—The Orangeburg Automobile Co., capital \$1,500. Officers: W. C. Wolfe, president; H. C. Wannamaker, vice-president; W. D. Berry, secretary and treasurer.

New York—Automobile Transportation Co., capital, \$5,000. Incorporators and directors for the first year: E. G. Milne, N. Y.; Thomas Sinnott and Robert Blake.

## GOSSIP OF THE GARAGES



PENCE GARAGE AT MINNEAPOLIS

**Fearless in Bunches**—The Banker Bros. Co. received two car loads of Fearless vehicles this week at its New York garage.

**Knox Hat Delivery**—A prominent New York hatter is negotiating with the Knox Automobile Co. for an outfit of delivery wagons.

**Royalty in New York**—The Duerr-Ward Co., of New York, though it received the first of the Royal tourists early last week, has taken orders for seven of them.

**New York to St. Louis**—The Clement-Bayard car fitted with Continental tires, which is making a run from New York to St. Louis in the interests of the Rowman Automobile Co. and the Continental Cautchouse Co., of New York, has reached Buffalo.

**Mercedes on Hand**—The first two of the 18-28-horsepower 1904 Mercedes secured by Smith & Mabley, of New York, have arrived and were on view at their garage last week. Others will follow in regular weekly shipments, enabling orders to be filled within 10 days.

**Oldsmobiles Wanted**—The Auto Storage & Repair Co., of Buffalo, N. Y., has opened a garage and repair shop in which a specialty will be made of caring for Oldsmobiles. The company also wishes to secure the agency for a car. C. E. Shaw is manager and Charles F. Henzins is secretary and treasurer.

**Husky Italian Immigrants**—An Italian steamer due Wednesday had on board consigned to Hollander & Tangeman, of New York, a 60-horsepower Fiat of international cup race type and also several chassis. The engine for the boat which is matched against the Smith & Mabley Simplex was also on board.

**Fine Northwest Garage**—The finest automobile building in the northwest, and probably one of the finest in the United States, was opened in Minneapolis, Minn., last week by the Pence Automobile Co. The building occupies three ordinary floors, is four stories high, built of brick, and equipped with every possible convenience for the conduct of the automobile business. The ground floor of the building is 130 by 50 feet. The show room and offices, which are in the front of the ground floor, occupy 50 feet of the depth, while the balance

of that floor is devoted to the garage. The second floor holds the machine shop, one of the most completely equipped west of Chicago. The entire third and fourth floors are given up to storage. The entrance facilities are especially good. In front is one main entrance, which leads back into the garage. From "Automobile alley," the rear, there are three entrances, two on the main floor and one onto the great electric elevator, which has a capacity of 6 tons. Wash racks are found on the main floor and in the large basement, and also in the rear of the building. The structure is steam-heated, and was erected at a cost of \$75,000. The Pence company has added the Clinton marine engine line and the Foss stationary engine to its equipment.

**Speed Sold the Car**—As a result of an impressive little burst of speed it showed on a recent Sunday run of the Long Island Automobile Club, L. R. Adams, its former president, gave forthwith an order to Manager Hopkins, of the Brooklyn Automobile Co., of Brooklyn, N. Y., for a two-cylinder 14-horsepower Haynes-Apperson two passenger car. With two in the vehicle besides himself Mr. Adams drove it over a 9-mile stretch near Freeport in 12 minutes—a 45-mile-an-hour rate. There are fourteen cars in the Kokomo factory receiving special fittings for Brooklyn and New York buyers.

**All Builders' Fault**—Unavoidable delays on the part of the builders have compelled the National Capital Automobile Co. from opening its new garage on Fourteenth street, Washington, D. C. Manager Wood has been given positive assurance that the building will be ready for occupancy by the middle of next week. Business is still up to the top notch with this company and orders are piling in so heavily that Manager Wood despairs of ever getting enough machines from the various factories represented to fill them. The first Oldsmobile

touring car reached Washington this week and was immediately sold.

**Enters Manhattan**—The Daimler Mfg. Co. of Steinsway, L. I., has established a retail garage at 10 West Sixtieth street, New York.

**Moved Few Doors**—The Buffalo Motor Car Co., Buffalo, N. Y., agent for the Columbia, has moved from 918 Main street to 893 Main street.

**Air-Coolers Make Hit**—M. A. Cornell & Co., the New York agents of the United Motor Corporation, of Pawtucket, R. I., are kept busy giving demonstrations of the Cameron cars, which are making an encouraging debut in the metropolis.

**Orders in Relays**—The first shipment of Relay cars has just been received by A. L. Kull & Co., who were recently appointed Washington, D. C., agents. They are attracting much attention and Mr. Kull has already booked several orders for them for immediate delivery.

**Hartfords Take**—Royce Hough, the new manager of the Washington, D. C., branch of the Pope Mfg. Co., is achieving great results with the different Pope cars. The Pope-Hartford has taken Washington, and Manager Hough finds it a difficult matter to keep one on the floor even for exhibition purposes.

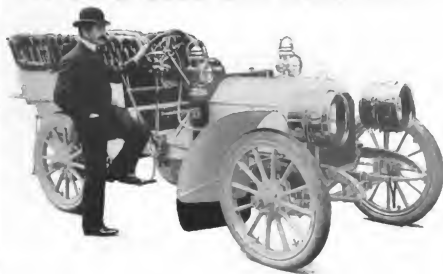
**Jay in Minneapolis**—The White car is gaining a strong footing in Minneapolis, Minn., this year. The agency of the Haynes Auto Co. has become important enough to receive frequent visits from Webb Jay, and many buyers have enjoyed runs with him at the wheel, which gave them a glimpse of the work he did in the endurance run.

**Going It Alone**—George Andrews has succeeded the Hayes Automobile Co., at 437 Pearl street, Buffalo, N. Y. He was the manager of the old concern and will continue the business in his name on the same lines. Mr. Hayes, who controlled the local agencies for the locomobile, will keep the agency, but on account of his being absent from the city so much he will leave that end of his business in the hands of Mr. Andrews.



INTERIOR OF THE PENCE GARAGE AT MINNEAPOLIS

# AUTOMOBILE DEVELOPMENT



THE FIAT ITALIAN CAR

## THE FIAT OF ITALY

The Fiat is the Italian Mercedes, introduced to this country as the F. I. A. T. by Hollander & Tugeman, of New York, and since through familiarity come to be known as Fiat, a more convenient blending of the initials of its manufacturers, the Fabbrica Italiana di Automobili Torino.

The main frame of the Fiat car is constructed of pressed steel. It has no under frame, either for the engine or gear box. Opposite the engine it is "strangled" or narrowed, in order to give an increased angle to the steering wheels. There are two lengths for each type; for the 16-20-horsepower model one 7 feet 7 inches long and one 9 feet 6 inches long; for the 24-30 horsepower model one 8 feet 10 inches long and one 9 feet 9 inches long. The latter length of each is especially made to allow a side entrance body to be fitted.

The semi-elliptic side springs are made very long, the side-spring horns in front forming a part of the pressed-steel frame.

All the Fiat cars have four vertical cylinders, which are cast in pairs and fitted with mechanically-operated inlet and exhaust valves. The 24-30-horsepower motor has cylinders of 130 millimeter bore by 130 millimeter stroke, while the 16-20 horsepower motor is 110 by 110 millimeters. The dimensions approximate 5% and 4% inches, respectively.

The Sims-Bosch magneto electric ignition is fitted on the right side of the motor, driven by noiseless red-fiber gear wheels, all batteries, coils, tremblers, etc., being dispensed with.

A genuine Daimler honeycomb radiator is fitted on each car. It holds about 1½ gallons of water. This is circulated around the cylinders by means of a centrifugal pump, driven by fiber gears from the half-time valve cam shaft. To cool the water the clutch is fitted with fan blades around its outer periphery, which in revolving draw the air through the hood and radiator.

The clutch is of the expanding type, such as used on the Mercedes car. It is fitted into the drum in the center of the fly wheel, and consists of a flat spiral spring about 7 inches in diameter, one end of which is made fast to a boss on the fly wheel, while the other end is free. A bell crank lever is attached with a small roller at the end, which is engaged by a cam sliding

on the main shaft. The lever is moved by the roller running up the cam, which motion tends to tighten one end of the clutch spring, which grips a hollow cylinder mounted on the main shaft.

The gear of the 1904 Fiat has been entirely remodeled, and the second motion shaft now lies at the left of the first motion shaft. The gear box has a very large inspection cover, and its sliding members are mounted on two independent sleeves. The reverse intermediate gear is carried by a rocking arm. The speed change lever moves forward and backward in either of two alternate slots for the four forward speeds, and has a safety catch which, when withdrawn, allows it to pass to the third slot for the reverse speed. The gear, counter shafts and axles are all fitted with ball bearings. The final drive is by two roller chains.

Two brakes are fitted, and are actuated by the usual pedal and lever. They are both metal to metal, and powerful. The side brakes are of

the internal expanding style, and are compensated by springs. The foot brake is connected with the clutch in such a way that this is withdrawn when the hand lever brake is applied.

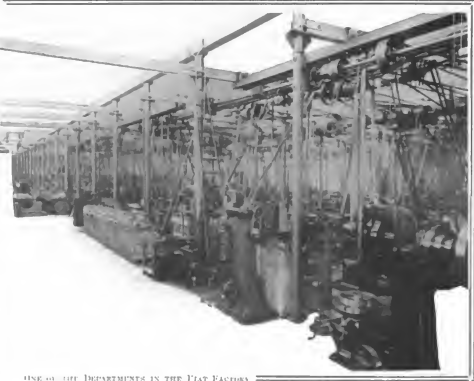
The lubricator is mounted on the dash, and is driven by a round belt fitted on the rear end of the cam shaft. A large pulley, over which this belt runs, is fixed upon a shaft passing into the lubricator fitting. The shaft carries a worm wheel on a cross shaft, upon which are mounted four small paddle wheels and a central sprocket; from this a peculiarly constructed chain is led to a similar wheel mounted in a lower compartment of the lubricator. The lower compartment forms the oil reservoir, and the chain, which has buckets provided for this purpose, raises the oil from the lower to the upper compartments, maintaining therein a constant level. The paddle wheels pick up a certain quantity of oil each time they revolve, and drop it into the pipes which lead to the crank chambers. These buckets revolve in proportion to the speed of the engine, insuring consistent lubrication.

The Fiat carburetor automatically regulates the quality of mixture at all speeds without relation to quantity. The carburetor throttle is connected through the hollow exhaust cam shaft with the governor on the forward end of the shaft. The speed of the engine can be regulated by a small lever placed above the steering wheel or by a small foot pedal placed between the clutch and the brake pedal. This is especially advantageous when driving in traffic, as it does away with handles on the steering wheel and leaves the hands free to steer. The float feed is of the usual type. Its gasoline supply is forced up from the tank by the exhaust pressure.

The weight of the 24-30-horsepower chassis is about 1900 pounds. It may be equipped with any style of body.

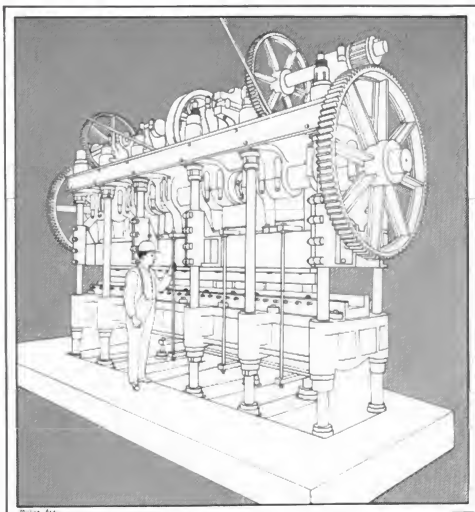
## DESIGNED NEW FENDER

Ferdinand Reich, an old and well-known carriage forger of Detroit, Mich., has applied for a patent on a new automobile fender, which he claims is superior to any now on the mar-



ONE OF THE DEPARTMENTS IN THE FIAT FACTORY





THE PRESS USED IN MAKING FEDERAL PRESSED STEEL FRAMES

ket. He has been perfecting his invention for several months and thinks that he has a fender entirely free from the body motion of the motor car. It is constructed on No. 18 steel rolled, double concave iron and weighs about 12 pounds. It can be adjusted to any size wheel and is easily removed for cleaning purposes. It is fastened to the steering gear by sockets in front and to the axles in the rear by the same means. One of the features of the fender whereby nails and tacks picked up on a tire are automatically abstracted before another revolution of the wheel is made is being commented upon very favorably by those who have seen the new device. This is accomplished by a number of fine teeth at the lower end of the fender and inside.

#### BRAKES DISCUSSED

S. F. Edge, in a recent interview, stated that most of the automobile accidents were caused through negligence in keeping the brakes in order. Apropos of this statement a Paris daily paper interviewed a number of French manufacturers.

An official of the Gobron-Brillie company said: "My opinion is that the brakes of the present day are good enough under all circumstances, when kept in order. Some motorists take the greatest care in cleaning their carburetor, their motor, their friction clutch, but forget all about their brakes, which they seem to think are everlasting and require no attention or adjustment."

Louis Renault thinks that there is nothing more sure about a modern motor car than the brakes, that accidents are generally caused

through neglect and that while the brakes are more powerful and effective than ever they require to be taken care of just like the motor. C. L. Charley, the Paris Mercedes representative, remarked that it was practically impossible to lose control of a car if the brakes are in good working order.

Both Messrs. Bouton and Clement said that the brake question was one of those which received particular attention in their respective factories and that more effort is spent in improving them than in developing any other single part of the vehicles.

#### PRESSING STEEL FRAMES

The magnitude of the machinery required in the manufacture of pressed steel automobile frames is illustrated by the press used by the

Federal Mfg. Co., in the production of its frames of this character. The picture herewith is redrawn from a photograph and the size of the press may be relatively judged by the man who operates it.

The press is 18 feet long, 15 feet high and weighs 50,000 pounds. It takes work up to 17 feet in length and 24 inches in width, and this is given a "squeeze" of 1,200 tons. The press is provided with a brake operated with a lever, so that the stroke either up or down may be stopped instantaneously. A vertical adjustment of 18 inches is provided.

#### NEW USE FOR MOTOR BOATS

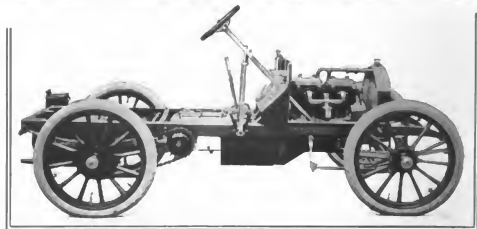
H. H. Rogers, Jr., of New York, has just placed an order with the Electric Launch Company, of Bayonne N. J., for a 31-foot automobile boat of novel design. The boat will be equipped with hoisting shackles at bow and stern, especially installed so that the complete boat can be lifted on the davits of the steam yacht Kanawha. The total weight of the complete boat, with engine, does not exceed 1,100 pounds. The plan of carrying one of these fast boats on the steam yacht's davits will undoubtedly prove popular among yachtsmen when at anchor; diversion can be obtained by the owner and his guests in speeding about the harbor and inlets.

The launch will be built of Honduras mahogany, with double planking of veneer thickness, fastened throughout with copper rivets. Accommodation is provided for four passengers. The boat will be equipped with a 30 to 35-horsepower high speed automobile engine, which Mr. Rogers has selected himself. A speed of 20 miles an hour Mr. Rogers expects to obtain from this boat, and he will enter it in and about New York and on the sound during the summer, and use it from on board the steam yacht Kanawha during long cruises.

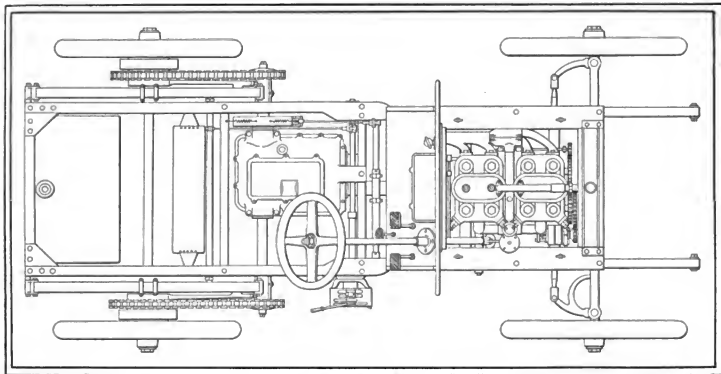
#### AUTOMATIC TIRE PUMP

Back in the days when the patent office was flooded with bicycle inventions hardly a week passed without the issuance of one or more patents for devices intended to automatically inflate the pneumatic tires of bicycles. These fell one and all by the wayside. The bicycle as a machine was not of a type that could be encumbered with numerous attachments. Devices fragile enough to be attached to and derive their power from the bicycle were not practicable.

The automobile presents a different condition. Being a machine standing erect on its own wheel base and being equipped with a power plant that may be operative while the



SIDE ELEVATION OF CHASSIS OF THE FIAT CAR



PLAN OF THE CHASSIS OF THE FIAT CAR

machine is standing still there is every chance for the attachment to it of devices to save manual labor in the care of the car. The automatic tire pump becomes, hence, a practical device in theory. Its practicability in fact is up to its manufacturer.

There is now being introduced in Europe a device of this kind which seems to be entirely practical. It is produced in continental Europe by Zuercher-Mery & Co., and in England under license for Charles Jarrott & Lettis, Ltd., of London.

The pump, which derives its power from the motor directly, has been extensively tried and pronounced very satisfactory in its operation. The time taken in the trials for the inflation of the tire was from 2 minutes 45 seconds to 3 minutes 30 seconds, to obtain the necessary pressure.

The attachment is simple. A connection nut is screwed into the cylinder. If ordinary sparking plugs are used, it can be screwed into the same orifice as that in which one of the sparking plugs is attached and the sparking plug can then be screwed in at an elbow-joint of the fitting.

The force of the explosion in the cylinder is conveyed through a small curved steel tube to a small metal pump box, which can be affixed on the dashboard or on the side of the car, and which is fitted with a pressure gauge and rubber tire connection. The whole attachment can be made in a few minutes and when once affixed, the device need not be taken off, as all that is necessary to pump up a tire is to unscrew a small fly nut in the side of the dashboard, screw in the rubber connection, connect with the tire, and then start the engine. The tire will be pumped up hard in about 3 minutes.

#### EDISON SAW THE TRICK

Something which is considered of more than passing interest to the automobile industry is the information that Thomas A. Edison, the famous inventor, with the support of President Roosevelt, has gained a valuable point in his

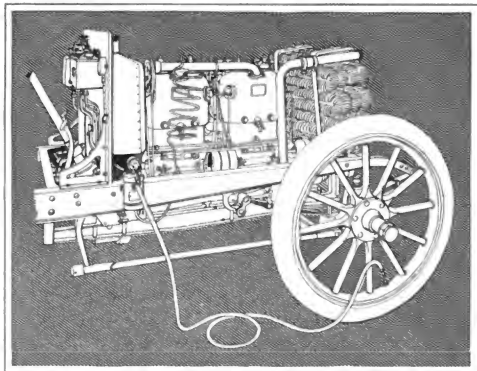
effort to expose a piece of trickery in the patent office, such as is alleged to have become common practice in this great government department. In this case the commissioner of patents is indirectly involved, and the good faith, if not the honesty of one of the examiners.

The facts in the case are substantially as follows: Mr. Edison made application for a patent for a device to be used in connection with his storage battery, which he has said would revolutionize the automobile industry and greatly benefit consumers of electricity. It is charged that while the application was pending the examiner in the case permitted an inventor who was operating along the same line to withdraw his application, amend it so as to

incorporate the valuable points of the Edison invention, and return it again for file. As the original of the amended application was filed before the Edison application it would, under the law, take precedence.

When Mr. Edison's attorneys discovered the trick they filed a protest, and asked for a hearing, which was refused. An appeal was then made to President Roosevelt, who is reported as saying: "Mr. Edison makes no unreasonable demand. He occupies a peculiar position in this inventive age and he shall be given an opportunity to be heard."

It is understood the case was heard by Assistant Commissioner Moore, in the absence of Commissioner Allen, who has gone to Europe. The result has not yet been announced.



THE AUTOMATIC TIRE PUMP IN USE

## FROM THE FOUR WINDS



MISS BEATRICE MICHELSEA, OF THE "GIRL FROM DIXIE" COMPANY

**Growing Slowly**—There are sixty-one registered automobiles in Harrisburg, Pa., of which fourteen represent the addition to last year's total.

**French Voltage Increases**—According to a Paris journal electric vehicles are again becoming popular in the French metropolis, especially among the society people.

**Getting Ready for Jail**—Agricultural and horticultural societies of Madison county, Ind., have decided to use shot guns against automobile drivers who frighten their horses.

**An Automobile Warehouse**—An exclusive automobile and carriage storage warehouse is being erected in St. Louis, Mo. It will cost \$35,000, be fireproof and have five stories. John F. Herrmann, of the Herrmann Realty Co., is the proprietor.

**Combination Affair**—A committee has been appointed by the Fume Fire Co., Wilmington, Del., to secure an automobile which will combine a chemical engine and a hose carriage. The machine will be purchased from the La France Fire Engine Co., and cost \$5,000.

**Good Judge**—Fifteen owners of automobiles in Detroit, Mich., were fined \$1 and costs each for having violated the law which provides that cars drive after dark must have lights. The court decided that if the violators remain good for one week the fine will be remitted.

**Demory with Timken**—A. R. Demory, formerly superintendent of the Snell Cycle Fittings Co., of Toledo, O., is now representing the Timken Roller Bearing Axle Co., of Canton, O., and is calling on automobile manufacturers in the interests of Timken bearings.

**Mark Still Safe**—Baron de Caters tried to break Rigolly's kilometer record May 1 on the beach course of Ostende, Belgium. He drove a 90-horsepower Mercedes car and covered the kilometer in 24.25, which, although not near the record mark, represents a speed of more than 90 miles an hour.

**Frighten Women**—The chief of police of St. Paul, Minn., is after the reckless drivers of the Miesota town. There have been many complaints lately that motorists are driving too fast in the crowded streets, and it is reported that several women have fainted near crossings, owing to the fact that drivers would run their cars at high speed to within a few feet of the street crossing, thus frightening women. The speed limit is 8 miles an hour within the business district, and cars must slow to 4 miles an hour on crossings. Each car must have a bell or horn

and at least one light. Automobiles must be licensed and the number of the license must be painted on the back of the car, the numbers to be 4½ inches high.

**Make Many Motor Cycles**—In a recent letter to a London trade paper Peugeot Brothers, of France, stated that they had sold 4,000 motor cycles and 2,000 motors last year. During the first 4 months of this year they have disposed of 2,000 motor bicycles and are prepared to sell more than 6,000 during the season.

**Plant at Moline**—The Moline Automobile Co. and the Root & Van Dervoort Engineering Co., of Moline, Ill., have each purchased 6 acres of land, upon which the first named concern will erect a modern automobile factory and the engineering company a foundry and a special building for the finishing of automobile and boat motors.

**Coast Branch Enlarges**—The branch store and repair shop of the Diamond Rubber Co., at San Francisco, Cal., has been removed from 8 Beale street to larger quarters at 608 Mission street. The company reports a prosperous business on the Pacific coast, where Diamond tires have been thoroughly introduced during the past few years.

**Sporting Blood Up**—Three owners of automobiles of different make are planning to settle the question of superiority some time during June in a three-cornered race, covering a distance of 50 miles, in the neighborhood of Kansas City, Kas. The three cars are a 14-horsepower White, a 24-horsepower Pope-Toledo and a 7-horsepower Stevens-Duryea.

**Came Back to Numbers**—The automobile ordinance of Grand Rapids, Mich., provides that the driver's initials be displayed on the rear of the car. It appears that an alderman of the town recently tried to have a motorist halt his machine, and as the driver did not do so the alderman tried to figure out the initials. They were so complicated that he decided to introduce an ordinance to allow numbers to be substituted for initials.

**Timing Peeters**—Chief of Police Conroy, of Minneapolis, Minn., has been "throwing a big bluff" into the motorists this spring in the hopes of bringing them down to the speed limit without resorting to arrests. His efforts have been highly successful and drivers have taken it upon themselves to see that the speed limit is not frustrated to any great extent. There are a few reckless ones, though, who will wind up in the police court. Chief

Conroy has provided several of his men with stop watches, and is going to institute a corner-to-corner check system on the racing streets. When a driver sees a man in plain clothes holding a stop watch at the edge of the sidewalk, he will soon learn that the emergency stop has advantages.

**Onto the Scheme**—The commissioners of Radnor township, Philadelphia, Pa., passed a new ordinance a few days ago which provides that an automobile must not be driven at a greater speed than 1 mile in 6 minutes. The former ordinance called for an uniform speed of 10 miles an hour, but it appears that some motorists ran their cars at 7 to 8 miles during 30 minutes and then covered the other 2 or 3 miles in the remaining 30 minutes.

**Very Benevolent**—The Indianapolis Automobile Racing Association, of Indianapolis, Ind., was incorporated last Saturday for \$1,000. Frank B. Willis, James Allison and Charles R. Sommers are the incorporating members. The purpose of the company is "to promote and encourage the mechanical arts as applied to the manufacture of vehicles propelled by gasoline, electricity and steam." Race meets will be the direct means of attaining the end.

**Never out in the West**—The Motor Car Supply Co., of Chicago, has taken the western selling agency of Neverout lamps, made by the Rose Mfg. Co., of Philadelphia. For about a year S. F. Baneroff has had this agency and now that it has been turned over to the Motor Car Supply Co., Mr. Baneroff has been engaged by it to sell this line especially as well as the other goods for which the company is general western distributor.

**A Pullman in Reality**—M. Menier, the French chocolate manufacturer, has placed an order for a 40-horsepower touring car which, it is claimed, will be the finest car of this kind in the world. The body will be large enough to hold two beds, four arm chairs, a dining table, toilet outfit and a heating apparatus. There will be three entrances, two on the sides and one in the rear. The car will be lighted by electricity and will cost about \$20,000.

**Motor Mail for Fair**—Postmaster Wyman of St. Louis, Mo., has announced that in order to facilitate the postal arrangements at the world's fair an automobile service will be put into operation. There are thirteen substations on the exposition grounds. The automobiles will make five daily trips, collecting and delivering mail at each one. It is this way Mr. Wyman hopes to insure mail as accommodations far superior to those had at the Columbia or Buffalo expositions.

**Fine or County Jail**—Thirty-two owners of automobiles have thus far registered their cars with the proper authorities of Oshkosh, Wis., but the chief of police is satisfied that there are a number of others who have not yet complied with this most important regulation. It is also reported that the chief is not satisfied with his brother chauffeurs, claiming that they sometimes ride too fast. The speed limit is 8 miles an hour in the streets of Oshkosh and at crossings and bridges only 4 miles is permitted. All cars must be provided with a lamp, bell or horn and must stop when they approach a team which seems to be frightened. Offenders may be subjected to a fine from \$5 to \$25 and a trip to the county jail not to exceed 60 days.

# MOTOR AGE

VOL. V. NO. 21

MAY 26, 1904

\$2.00 Per Year

## CHICAGO'S SCRAMBLING PARADE



THE CLUB HOUSE VERANDA AND A GROUP OF MEMBERS AND GUESTS

**P**ARADING in automobiles is not an exact science, if the parade of last Saturday in Chicago may be taken as an average performance. It was a good parade and the Chicago Automobile Club deserves

credit for its enterprise in promoting it, and its work in conducting it to a successful finish. But as a spectacle for the Chicago public it became rather a gymnkhana than a procession. Parade in name, in effect it was an obstacle race, in which Chicago traffic played the part of the obstacle. There was no prize for covering the course, but many of the contestants were simply pure amateurs and were willing to take a chance for the sake of mere glory. It was rumored that Chief of Police O'Neill, who accompanied President Farson, was much disappointed because he was forced to finish in the "tourist" brigade.

The story of the parade is easily told: A fine day; boulevards lined with good natured onlookers; 228 automobiles; a band; human nature, and a scramble. It brought to memory old bicycling days when a bicycle parade developed into a jockeying contest, in which the participants all seemed anxious to be near the fellows who were most likely to "start something."

fully wound its way at the genteel pace of 8 miles an hour; but in Michigan avenue it was different, and the electric trucks which brought up the rear had to cut the course a little bit

to get back to the judges' stand before the crowd left.

The parade was an excellent demonstration of the fact that an electric freight truck full of music is not swift enough to lead an automobile parade. A James Gordon Bennett Informational cup race team would be more fitting, with Messrs. Rigolly, Jenatzy, Edge, Farman and Oldfield as chief marshalls.

The parade had been under preparation for some time and the club had invited all automobilists to participate in it, the object being to demonstrate the prominent, peaceful part automobiles play in the affairs of Chicago, rather than to simply boost the club in the community's estimation. It was to be a gala day and the mayor and other well known citizens had been asked to join in the festivities.

The club did its part well, the weather man furnished a bright, cheerful spring day, and the automobilists gathered on time, so that the parade was actually started on or close to the scheduled hour. It was a prepossessing army of well behaved automobilists and as the cavalcade wound westward toward the first objective point it was about as orderly a string of motorists as would be possible to get together.



THE PARADE ON JACKSON BOULEVARD NEARING STATE STREET, ON RETURN TRIP

In some of the daily papers the parade duti-



MR. GREENE ENJOYS THE PARADE



CABINETS WERE PLentiful

At the beginning of the second lap, however, some of the middle bunch stole by the leaders and set a hot pace for the grand stand. The parade widened up and was soon spread all around the track. When the bell rang for the commencement of the last lap, the participants were so stung out over the course that the scorers lost track of the laps and were unable to furnish an accurate table of the order of the finish. In fact, after first honors had been nominally awarded, a "knocker" came in with a yarn about the hero having cut the course, and so about the only decision that the judges could make was that the band wagon had been lapped twice.

Despite the breaking-up of the procession, however; despite the persistent breaking of the speed limit of the city of Chicago, and despite the inconsiderate "shaking" of the band wagon and the commercial vehicle section, the parade accomplished one thing that had never been accomplished before by a Chicago parade. It covered the schedule course without causing the onlookers to lose two meals waiting for it to go by.

In doing this, it incidentally taught Chicago a more important lesson than would have been taught had it made its way with military precision. It showed Chicagoans that over 200 automobiles could run through the most crowded thoroughfares in the world at from

15 to 20 miles an hour without damaging anybody or anything.

It is probable that the way the vehicles went helter-skelter through the city without danger of accident of any kind did more to impress the city officials who were on the run with the great convenience and safety of the automobile as a city conveyance than a mere lock step in which restraint rather than skill, intelligence and adaptability to conditions, preserved the peace of the community, would have done.

Automobiling had shown itself to be entirely in sympathy with the conditions of congested traffic, even when carried on at a speed greater than that prescribed by the municipal regulations.

At one time there were 200 automobiles going both north and south on Michigan avenue within an area of six blocks, and travelling at speeds varying from 10 to 25 miles an hour. In addition to these cars were hundreds of horse-drawn vehicles, and thousands of pedestrians.

It was ordinary automobiling, with the number of cars on the same street at one time greatly increased. It was the same kind of automobiling that has been called dangerous and worse names by daily papers and motor-phobes in general. It was the same kind of automobiling that municipal governments seek

to "regulate" with licensing, numbering and speed limiting. It was the automobiling of Chicago, centralized for a brief spell.

If Chicago's automobiling scattered over the city is a dangerous factor in the use of the streets, surely this collective automobiling should have been much more dangerous. Yet there was no accidents, and the people of the town did not seem to be greatly inconvenienced by it. Rather they enjoyed it.

The parade started at 2:30 in the afternoon from the club house of the Chicago Automobile Club, 243 Michigan avenue. Both sides of Michigan avenue were lined with spectators and the cars pulled up along the curbs also, while being formed in line by the marshalls. The club house porch, which is wide and high, was well decorated with the club colors, purple and gold, and as soon as the paraders started to form, committees began to decorate them with ribbons of red, white and blue, indicating that the wearer of each respective color was a member, a lady or a guest, as the case might be. It was especially thoughtful to label the ladies, so that the community would not make a mistake.

The prettiest picture furnished during the whole run was just before the start, when the eleven score of cars were drawn up between lines of spectators, and the club house



MRS. H. F. LOGAN AND PARTY



C. A. COYNE'S DECORATED THOMAS

serenade, as a brightly colored hawk ground, was thronged with fair women and good natured men. A policeman studied the situation carefully and passed on, leaving the affair to the good graces of a very willing "sparrow cop" with white gloves and a new uniform.

Chicago officials, and prominent personages generally, had been invited as guests of the club and many of them were on hand. Prominent among them were Chief of Police O'Neill, Corporation Counsel Tolman, acting for Mayor Harrison; Park Commissioner Foreman, several aldermen, and Mayor Gates and six aldermen of Wilmette. The latter party was the only representative from the several suburban towns whose officials had been invited.

Jerry Ellis with his big Apperson full of distinguished guests was chief marshal. His scheduled assistants were A. J. MacBuffy, Henry Ullman, W. H. Mason and J. B. Burdette.

The parade was formed with a big Montgomery Ward electric truck just behind the pacemakers, this truck holding the Naval Reserve Marine band. Behind came the gasoline touring cars, then the gasoline runabouts, and following these the steam and electric cars. Commercial vehicles brought up the rear. These included a beer wagon, a furniture van belonging to A. H. Revell & Co., and a half dozen trucks of the Chicago Edison Co.

The gasoline cars, of course, predominated, and were out in all of the fifty-seven varieties. A notable fact was that several of these, as well as several electrics, were driven by women. One Knox had a party of four women. There had been no general attempt at decoration of the cars, but a few of the vehicles were bedecked with flowers. Especially notable in this respect were the cars of Jerry Ellis and C. A. Coey.

The parade started at a leisurely gait up Michigan avenue and turned westward into Jackson boulevard. The western terminus was Ashland avenue, and up to this point the procession was practically unbroken in its formation. At the turning point, however, the scattering began.

The leaders turned north into Ashland avenue to allow a block or more space on the wide asphalt for orderly turning. There was a slight gap between these seven or eight cars and the rest, and when the second bunch came the leader of it, instead of turning north in Ashland, turned clear around right on the corner. The rest of the paraders followed suit, and thus were the leaders cut off. They scrambled back as soon as possible into the line endeavoring to reach the front. Others had the same end in view and the line going back toward the lake was broken into several squads, each interrupted occasionally by the passage of cross-line street cars.

Sweeping into Michigan avenue for the run south to Twenty-second street, the first brigade saw a much clearer street ahead and took advantage of the opportunity. Then did the parade cease to be a parade, and soon Michigan avenue was full of all kinds and sizes of automobiles going south and coming north at paces to suit individual fancy. Almost last of all, the band wagon came swooping gracefully down the boulevard at the head of the commercial vehicle battalion, and these dignified electrics continued on their way south and then back to the club, seemingly unaware of the fact that the parade was substantially at an end.

THE PARADE BEHEARD WEST ON JACKSON BOULEVARD WHEN NEARING ASHLAND AVENUE

LEADER OF THE COMMERCIAL VEHICLE DIVISION OPPOSITE THE CLUB HOUSE



CHIEF MARSHAL JERRY ELLIS AND PARTY TURNING AT JACKSON AND ASHLAND

WHEN THE SCRATCH BUNCH OVERTOOK THE LEADERS MEN AT THE TURN

Good nature had prevailed throughout and when the members of the club and their guests gathered at the club house after it was all over, it was a very satisfied gathering indeed. Most of the more active ones in the promotion and management of the parade were well pleased in the result and official guests were not backward in expressing their gratification at the ease and certainty with which automobiles could be managed. Chief of Police O'Neill is quoted as saying:

"I had no idea that the high-power automobile was so easy and so certain to be controlled. The machines are more docile than horses, quicker to respond than any machines I ever heard of, easier on pavements, less noisy and more comfortable than any pleasure vehicles I have ever tried. They go very fast—incidentally fast—but they can be stopped so quickly and so certainly that all danger is minimized."

One of the most fortunate features of the parade was that despite the swift, rather ragged running the cars not only went through without accident or mix-up which would endanger onlookers, but without accident to themselves. The automobiles in line seemed to catch the spirit of the thing and for once, at least, the newspaper alleged funny man looking for a chance to make jokes at the expense of luckless automobilists, was out of commission.

After the parade the club served luncheon in the club house. During this social function President Farson was presented with a portfolio of photographic views of his Oak Park home and its vicinity, these pictures having been taken on the occasion of the club run to Oak Park the previous Saturday.

Just of what permanent effect on the community the parade was is an indeterminable point. As previously stated its breaking up into a good natured scotch served the purpose of showing city officials the many advantages of automobiles for swiftly and safely plying through crowded districts. Such a showing must necessarily produce some results.

City officials naturally prefer friendly demonstration to open warfare, whenever there is a difference of opinion concerning the character of laws.

Being parties to a cheerful function in which 228 automobiles were sent over a 5-mile trip at a pretty fast gait and without any accident or difficulty, they must have gained something of the spirit of automobilism. They must have gained more friendliness for automobilists. They must have discovered that after all automobilists are only men and not a class of freaks. They must have learned that automobiles are ordinary vehicles for ordinary purposes of travel. The effect of the run on the officials who took part in it must have been good.

On the public the effect is more questionable. The public is fickle. It enjoys and smiles at any pagant. It will stop its bustling to watch a dead horse in the street. It was interested in the parade and should have made note of the ease of manner in which the automobiles took their way nerve town. But after the parade came the evening papers with the story of the ball game and human nature is prone to forget this thing in its interest in that.

The people had been entertained. The entertainment conveyed instruction for those who wished to grasp it.



# MOTOR AGE

Published Every Thursday by  
THE TRADE PRESS CO.  
1303 MICHIGAN AVENUE CHICAGO  
Telephone Calumet 7011

New York Office, 114 West 37th Street,  
London Office, American Publication Re-  
servation, 19 Manor Park Rd., Haringey, N.W.





Entered at the Chicago Post Office as Second  
Class Mail Matter

Subscription, Two Dollars per Year  
Foreign Subscription, Four Dollars

Any Newspaper may obtain Motor Age through  
the Western News Co., Chicago, or any  
of its branches, on a returnable basis

## NO REASONS NEEDED

**M**ANY causes, excuses, objections, etc., might be brought into consideration and discussion relative to last Thursday's dance whereby we hope of America's having a team in the James Gordon Bennett international cup race was abandoned.

There is no reason to discuss the situation. We are down and out for this year.

The why and wherefore are of no consequence. The fact exists.

Let it be forgotten as quickly as possible for the best interests of all concerned.

Let America's part in international cup racing be concluded.

Then let a new chapter be started in 1905 under the authorship of the only American national organization—what will be by that time the American Motor Association.

## LAW OF COMMON SENSE

**T**HIE times change rapidly. This is an old doctrine, but society is stubborn in recognizing it when an innovation is sprung upon it. Thus the automobile came to remodel all conditions. Society was slow to grasp the situation and put the motor carriage down as a mere interloper. Hence motorphobia, stringent laws and prejudiced newspaper editorials.

Society has commenced to adapt itself to the new order. In substantiation is this editorial from a recent issue of the Cincinnati Enquirer:

So profound a Journal as the Philadelphia Inquirer gives currency to this observation: "The most enthusiastic automobilist who ignores speed limits and tries to make a record is apt to be the very man who would resent the slightest infringement on his own life and property, which are protected by laws coming from the same ultimate source as those which control speed."

Of course, this sort of thing must be expected for a good while yet. The automobile is still a rather expensive luxury, though in these prosperous times it is becoming common. It has run through about the same gamut of criticism and objection that have been encountered by nearly every improvement in the means of getting about in the world. It is within the memory of living men when street cars were regarded as a menace to life. Many good but old-fashioned people still say their prayers when they get on a railroad train, not so much perhaps through pious considerations as a fear that a collision or a departure from the track may send them to their final account with an unshared burden of worldliness. The bicycle has barely survived the public indignation at a vehicle which seemed to them to have

been invented to run into pedestrians and break their bones.

Life gradually adapts itself to these great changes. The rights of the man or woman about must be radically preserved, but there is a greater necessity in the economy of affairs, for the individual to look out for himself a little. The pedestrian has rights. So has the man on wheels. The march of improvement is irresistible. In the judgment of this family journal the time has come when the automobilist must be treated with toleration, if not with polite consideration. The person who speeds along gracefully in a horseless wagon, as fast, say, as a horse can trot, is not necessarily a murderer. It is not plain on the face of things that he is out to run over and crush his friends, or his enemies; but his friends and enemies must look about them when they are crossing the street and not stubbornly stand in the way of the car of progress. This is the age in which everybody must "step lively."

Nor is the large city daily the only one to recognize the change in customs that has begun. Below is an article from a paper of Evanston, Ill., the town of all Illinois towns which has been most drastic in its measures and the enforcement of them. The article refers to the increased speed limit, at the time of writing under consideration and since adopted by the city council. It is as follows:

The proposed passage of a new automobile ordinance, which is at present taking some of the attention of our citizens, suggests a few points which may be of interest to those concerned.

Laws should be made right and then enforced; not made wrong and then left to the discretion of the police officers to enforce them as they see fit.

Laws should be made with regard to the greatest service through the greatest length of time.

Laws are the result of continuous adaptation, and when changed conditions make it apparent that a law is wrong it should be changed.

Approved of the first of these statements, it can be said that the present automobile ordinance is not right: the speed limit is too low and the member of the police force and of the city council know it is too low. But in order to rectify it they allow the officers on duty to give the motorists a margin which they think is reasonable. The business of police officers is to enforce the law and not to interpret it, and if the law is such that they cannot reasonably enforce it it should be changed. Almost invariably the motorists arrested have gone far in excess of the speed limit, and at no time have any of them been arrested for traveling anything less than 12 miles an hour. The fact of the policemen allowing the motorists a margin is tacit admission that the 8 mile limit is unreasonable.

With regard to the second of the statements at

## ONCE AGAIN

S C O O P E D	The Motor World Automobile Topics The Automobile Automobile Review The Horseless Age	S C O O P E D
---------------------------------	--	---------------------------------

## By MOTOR AGE

the only automobile paper to print in its last week's issue the story of the outcome of the problem of American representation in the international cup race.

The other papers—some of them issuing on Saturdays—said that this matter would be settled on Thursday. *MORON* AOK told how it was settled. The only trouble with "beating" the other papers on important news is that it is so easy it has ceased to be interesting.

the head of this article, it can be said that the present controversy is merely a question of temporizing and allowing conditions to continue which are wrong, or of settling the question and settling it so that operation will be right in the future, and it will be settled for good and all. The number of automobiles in use is constantly increasing, and with the demand for quicker transportation which modern conditions are bringing about the need is for a speed regulation which will last the longest and come the nearest adjusting the difference of both motorists and pedestrians. When the 8 mile limit was fixed it was thought that it would fill the requirements. Does it? It is not true that this low speed works an injustice to the owners of automobiles, and is it not true that the changed conditions and the demand for greater speed necessitate a change of the law to meet them?

Surely the reorganization has commenced. It will not be long before motor cars cease to be the "fad of the rich" and become in reality the vehicles of the world's business and pleasure.

## PREJUDICE ONLY TEMPORARY

**T**HE council chamber of Portland, Ore., was the scene of a lively debate last week, when the automobile speed ordinance was discussed. Councilman L. Zimmerman presented a project for an ordinance, limiting the speed to 8 miles an hour and providing a penalty of from \$25 to \$500 for violation of the law.

Fred T. Merrill presented an ordinance providing a speed limit of 12 miles an hour and asked a roll call on the proposition, which was allowed. The 12-mile limit was accepted.

"This proposition should not have been adopted," yelled Zimmerman. "It might have been just as well to make it 20 miles an hour. I would like to know how a policeman is going to arrest a motorist when he is passing at 12 miles an hour? But I don't see that the ordinance can be enforced, anyhow. They are lucky to be allowed to run on the streets at all—the way the streets are now."

"In a few years, when Mr. Zimmerman and the other old mosebunks are gone, there will be nothing else but automobiles," retorted Mr. Merrill.

"Well," replied Zimmerman, "by that time we'll tax you like a dog for being on the streets."

This is a fair sample of the temperament of legislators. It expresses a condition of prejudice which can be only temporary at best. Laws are bound to adjust themselves.

Paris authorities have decided to spend \$300,000 in improving dangerous road crossings, the intention being to lessen the number of automobile accidents. Suppose a good roads advocate were to advance such a reason to a collection of American farmers!

Boston is trying to rival St. Louis; it has just opened its park system to automobiles. On the other hand, the South park commissioners of Chicago have an automobile for official inspection tours—at least that was the reason given for its purchase.

Surprises are coming fast. The results of eliminating trials for the international cup race do not encourage a man to bet much on favorites in the big event.

In the light of the experience of the Chicago Automobile Clubs, future parade managers are cautioned not to give name to the affair until after it is over.



**MOTOR  
CARS  
AND  
MOTOR  
BOATS**



**IN THE  
ST. LOUIS  
WORLD'S  
FAIR  
GROUNDS**



PHOTOGRAPHS BY L. J. BARKER

## FRENCH TRIAL RACE



THEY DRIVING THE WINNING GEORGES RICHARD-BRAZIER

Paris, France, May 21—Very surprising indeed was the eliminating trial race of the candidates for positions on the French James Gordon Bennett international cup race team, for out of the twenty-nine starters only ten survived the six laps of the Ardennes circuit, and of these three best racers proved to be a rather unexpected trio. Thus Thery, Georges Richard-Brazier, Salleron, Mors, and Rougier. Turcat-Mery, become the French team, and Panhard, Darraque, Gobron-Brillie, de Dietrich, Clements and Serpollet were just back among the tourists, temporarily at least.

The race was run yesterday over the short-circuited Ardennes course, per schedule except in so far as the dropping out of nineteen cars was concerned. The total racing distance was 531 kilometers—329 1-5 miles—the course of 93 1/2 kilometers being covered six times, and there being five neutralized stretches totaling 5 kilometers in each lap.

M. Thery on the rather light Richard-Brazier took the lead in the second lap and was never sighted thereafter, having the race easily in his hands. Salleron drove a steady, consistent race, taking big chances on the many abrupt turns with his huge Mors and living close to Thery in his total average of speed.

Rougier on the Turcat-Mery was somewhat behind and while easily third was not greatly ahead of Gabriel, of Paris-Madrid fame, who drove a de Dietrich. Le Bon on a Serpollet steamer was fifth; Cuilliois, Georges Richard-Brazier, sixth; Teste, Panhard, seventh; Furman, Panhard, eighth; Pelzer, Serpollet, ninth; and Clement, Clement-Bayard, tenth, last of the finishers.

The Panhard put up a swift race at the start but could not keep up the gait, motor overheating being said to be the cause. The Serpollet cars were surprises, for while they did not qualify they, as steamers, had not been expected to stay with the fast brigade throughout so long a race, and finishing fifth and ninth respectively in such a hard fought contest was greatly to their credit.

The twenty-nine competitors were started in the following order: 1—Gabriel on a de Dietrich; 2—Ruras, Darraque; 3—Heuriet, Clement-Bayard; 4—Baron Pierre de Crawbez, Hotchkiss; 5—L. Thery, Georges Richard-Brazier; 6—Le Bon, Gardner-Serpollet; 7—Salleron, Mors; 8—Henry Furman, Panhard-Levassor; 9—Rigolly, Gobron-Brillie; 10—H. Rougier, Turcat-Mery; 11—Charles Jarrott, de Dietrich; 12—Beccomus, Darraque; 13—Guders, Clement-Bayard; 14—Achille Fournier, Hotchkiss; 15—Cuilliois, Richard-Brazier; 16—Chaulaud, Gar-

ner-Serpollet; 17—A. Leger, Mors; 18—Teste, Panhard-Levassor; 19—Durny, Gobron-Brillie; 20—De la Touloubre, Turcat-Mery; 21—Baron de Forest, de Dietrich; 22—Wagner, Darraque; 23—A. Clement, Clement-Bayard; 24—Amblard, Hotchkiss; 25—Stead, Georges Richard-Brazier; 26—Pelzer, Gardner-Serpollet; 27—Lavergne, Mors; 28—Tart, Panhard-Levassor; 29—Alexander Burton, Gobron-Brillie.

There were twenty-two French drivers, five Englishmen and two Belgians. The latter were Pierre de Crawbez and Guders. The Englishmen were Charles Jarrott, Alexander Burton, Baron de Forest, Henry Furman and Stead. Only one of the drivers never took part in a road race before, A. Clement. Baron de Crawbez and Teste were the two oldest drivers, having taken part in races since 1897. Henry Furman, Gabriel and Jarrott have previously driven cars in the cup race. Among the heavy car drivers Gabriel, Baron de Crawbez and Jarrott are the winners of the more important road races, having respectively won Paris-Bordeaux, the second Circuit des Ardennes Belges, and the Paris-Vienne races. Gabriel, Baras and Rigolly have won road races on light cars, the former being first in the Tour de France, Baras winning the first prize in his class in the first Circuit des Ardennes Belges and Rigolly getting the first prize in the second race of the Circuit des Ardennes. Thery and Wagner have won important races for volantes.

Mazagan, the starting point of the race, is a few miles from Vouziers on the road leading to Paris. At first it had been decided to start from Vouziers, but as this is an important town it was feared that there would be a large crowd at the start and finish and accidents might thus happen.

From the starting point to Vouziers, where the first control was located, is only a few miles. The road is straight and level and passes through the village of Bourcy. Quatre-Champs is the next important town. The road leading to it is fine and permits fast driving to the village of Balley, where there is a railway crossing.

Leaving Quatre-Champs the road turns suddenly and as there are many houses in front the drivers were not able to go very fast here unless they were perfectly familiar with the stretch.

The second control was at Le Chesne. The road leading to it is wide and level with a few slight undulations. At Houvelmont the third control was established; it is not an important locality but there is a railway crossing and that part of the road is in poor con-

dition, which resulted in the issuance of orders making this point a stopping place. A little way past this village is one of the most difficult parts of the entire circuit. It is in the shape of a very steep and long descent, which continues for several miles. There is also a local railway in construction on part of this grade, which left little room for the automobiles to pass.

After passing this part of the course there are a few miles of good, even road which permitted making up some of the lost time. At Villers-le-Tourneur another hard stretch began, worse even than the previous one. Here is a long turn, almost at right angles and partly invisible on account of houses. After getting past this turn the racers struck a beautiful straight road, several miles long, leading to Noy, where was the fourth control. From there to Rehel, where the last control was located, the road is zig-zag, and careful driving was necessary to avoid accidents. The scenery is magnificent all along this part of the course and is somewhat like that of the German race circuit on which the cup race itself will be run.

From Rehel to Mazagan the road is almost level, hard, and splendidly kept. Being wide enough to hold two cars side by side easily, and three when they are handled with care, it was natural that the fastest times were made on it, the distance from Rehel to Mazagan being about 20 miles. There being several small hills near the finish, spectators were able to see the competitors when they were still more than a mile away.

By order of the prefect of the Ardennes department all traffic on the roads of the circuit was interrupted from 4 o'clock in the morning until 4 in the afternoon. Five thousand soldiers were posted along the course, while twenty-five soldiers on bicycles were on hand at each of the five controls. The crowds at various vantage points were well handled and there was no public confusion to mar the race or to make it a dangerous affair for the spectators.

The stopping time at each of the neutralized controls were as follows: Ten minutes at Vouziers, 5 minutes at Le Chesne, 30 seconds at Houvelmont, 30 seconds at Noy, and 10 minutes at Rehel—26 minutes per circuit in all.

Of the ten concerns that took part in the eliminating race, six have previously taken part in races with heavy cars, and three with light cars, these being the Darraque, Georges Richard-Brazier and Clement-Bayard. The Hotchkiss has never before taken part in a race. The Mors and Panhard-Levassor were the only ones which have taken part in the international cup race, and the latter won the race in 1900 with Charron driving and in 1901 with Girardot in the seat.

All of the cars except the Gardner-Serpollet have four-cylinder vertical motors. The steamers have six horizontal cylinders. With the exception of the Gobron-Brillie all the gasoline cars have magneto ignition. The latter, incidentally, used alcohol for fuel.

The race of the ten French makers for representation on the international cup race team may be told in the following brief summary:

Three Richard-Braziers—One qualified, one survived and one did not finish.

Three Mors—One qualified and two did not finish.

Two Turcat-Merys—One qualified and one did not finish.

Three de Dietrichs—One survived and two did not finish.

Three Serpullets—Two survived and one did not finish.

Three Panhard—Two survived and one did not finish.

Three Clement-Bayards—One survived and two did not finish.

Three Darracqs—None finished.

Three Hotchkiss—None finished.

Three Gohron-Brillies—None finished.

Allowing points of 11 for entering and not starting; 1 for starting; 2 for finishing and 4 for qualifying, the comparative scores of the different makes would be:

Georges Richard-Razier .....	7
Mors .....	6
Turent-Mery .....	5
Serpulet .....	5
Panhard .....	5
de Dietrich .....	1
Clement-Bayard .....	4
Darracq .....	3
Gohron-Brillie .....	3
Hotchkiss .....	3

### ONLY WOLSELEYS FOR ENGLAND

There may be no Napier in the English international cup race team. After the preliminary trials which resulted in the selection of a Napier and two Wolseleys, S. F. Edge, the Napier driver, protested the selection, as evidenced in Motor Age last week, claiming that Clifford Earp, Napier, should not have been deprived of second position on the team because of his accident at the termination of the trials.

The race committee of the Automobile Club of Great Britain and Ireland met this week to consider the matter, but decided to stand by its previous selection. Mr. Edge consequently refuses to occupy a position on the team, this leaving him his original threat was his protest not sustained.

If Edge does not drive the team will be composed of three Wolseleys driven respectively by Girling, Jurrott and probably C. S. Rolls.

There is naturally a division of feeling over this matter, but the automobile club's committee is firm in its stand and believes that Mr. Edge should not be given the consideration he seeks, especially since he went about it in a rather unportsmanlike manner. The club of course would be sorry to have Edge out of the race.

## SEVERE TESTS ABROAD

### Hill and Endurance Contests for Cars and Motor Cycles at Exelberg and Berlin-Leipzig

The annual Exelberg hill-climbing contest took place May 9 near Vienna, Austria. The route was up a 9 per cent grade for about 2½ miles. This year, on account of the automobile show in the Austrian capital, it was expected there would be a greater number of competitors than in previous years, but the manufacturers were too busy and thus the number of contestants in the motor car class was rather small. On the other hand, there were twice as many competitors in the different motor bicycle classes.

The meeting was held under the auspices of the Austrian Automobile Club and the motor cycle section of the club. Previous records were broken in an astonishing fashion by the seconds instead of by fractions. For the first time in the history of the event an Austrian chassis with a German motor won the main race, that reserved for heavy cars. None of the motor cycles developed less than 3 horsepower.

Hyronimus, driving a Spitz car which had a 60-horsepower Mercedes motor, climbed the hill in 4:29½, breaking the previous record of 5:53½. Mauntners in a 40-horsepower Mercedes was second in this heat, which was reserved for heavy cars. Fritz Opel on a 24-horsepower Opel-Darracq won the heat for light cars. His time of 4:46½ in 52½ seconds better than the previous record.

There were three divisions in the motor bicycle competition, the first being for machines weighing not more than 110 pounds, the second for machines up to 145 pounds, the third for members of the motor cycle club. Nikodem on a Puch won the prize in the first division, his time being 4:57½, which was 4½ seconds faster than that of J. Dietrich, second. Wondrich, on a Republik, won the second division in 7:38½ and Lieutenant Stohausz, on a Laurin-Clement, won the members' race, his time being 5:10.

The endurance test for motor cars and motor cycles recently arranged by the automobile clubs of Berlin and Leipzig, under the auspices of the German Automobile Club, was held May 8. Some of the machines covered the route

from Berlin to Leipzig, while others made the round trip. The latter journey was equal to about 200 miles. Twenty-eight automobiles and forty-two motor bicycles were entered for the longer test, only fourteen cars and twenty-six motor cycles having entered for the run from Berlin to Leipzig.

It had rained for several days previous to the day set for the event, and as the roads were still muddy many prospective competitors did not show up. Of the eighteen cars that started on the long run, thirteen completed the entire journey, while only nineteen of the thirty-four motor cycles that started in the longer run finished. In the short test, eight out of eleven cars finished, while eleven of the twenty-two motor cycles completed the journey.

The cars were sent away two at a time, and at an interval of a minute. Many government officials followed the competition and will make reports of the event. There were few accidents of a serious nature, most of the competitors who did not complete dropping out on account of the conditions of the roads.

### RIGID FRENCH LAW PROPOSED

The French extra parliamentary committee named last year after the Paris-Madrid race, which is working on a set of new laws to govern automobile traffic in France, recently published a report which has given rise to much discussion in the daily as well as the trade papers.

The members of the committee, among whom are such well known men in the automobile trade as Darracq, de Dion, Max Richard, and Irillie, suggest that automobiles be divided into three classes. In the first, cars capable of averaging 25 miles an hour on level roads should be exempt from numbering and registration.

Cars developing from 25 to 40 miles an hour are designed for the second class, to be numbered and the drivers for such cars subjected to examination before being granted a driving license.

The third class is to be made up of cars above 40 horsepower and not to be sold except on special permission from the authorities. In this class it is designed that drivers shall not be permitted to operate cars without an extra permit, independent of any other permit the driver may already have and which applied for cars of other classes.



TYPICAL STRETCHES OF THE ARDENNES CIRCUIT, OVER WHICH THE FRENCH TRIAL RACE WAS RUN

## EASTERN RACING GOSSIP

### Motor Age Beat on Eliminating Fiasco Causes Comment—Races at Empire City Track Called Off—Bald Secured to Drive the Ford 999 and May Meet Oldfield in Match

New York, May 23.—The fact that Motor Age, which reached this city by the first mail on Saturday morning, contained a complete story of the American team trial fiasco of Thursday afternoon, despite its being well known that the paper's regular going to press occurs a day earlier in the week, created considerable surprise and complimentary comment among New York readers. Since the arrival of the complete story of the New York show last winter ahead of the eastern trade papers themselves New Yorkers have been prepared somewhat for the surprises of Chicago hustle and news printing speed Motor Age gives them when the importance of the occasion demands it. The subscribers to the other trade papers will not read the story until this week, when the news is old and the fraternity has grown weary of any mention of the ridiculous fiasco.

An immediate and much to be regretted outcome of Thursday's fiasco has been the calling off of the meet scheduled for June 4 by President Butler, of the Empire City track. The dispute over the wording of the contract, whereby the Automobile Club, which had previously released the track from all liability arising from accidents, thought to free itself from responsibility, also suggested to the Empire track president the possibility of damage suits arising from future race meet accidents and the difficulty that might arise should he seek to have the contestants free the track from the danger of suits on their account.

Neither Mr. Butler nor Secretary Reeves, be it understood, considered the danger from this source very imminent, nor the difficulty in guarding against it entirely insurmountable, but in view of the fact that the meet was scheduled more out of friendship for the automobilists and on account of Secretary Reeves' enthusiasm for automobile racing than as a business enterprise, Mr. Butler called the meet off and Secretary Reeves made no effort to induce him to change his decision. As a matter of fact the Empire management is busy preparing for its grand circuit trotting meets at the Yonkers and Brighton tracks and did not care to trouble itself very much to consider the question of possible damage suits and providing against them. It is probable that when the August trotting meets are over Secretary Reeves will be glad to bestir himself in the promotion of a metropolitan meet.

Automobile track racing advocates here do not fear any great impediment to circuit competition from the hastily determined precedent set by the Empire track management, whose action was taken really more from outside reason and off-hand disgust at the team trial fiasco than from any great fear of damage suits. If the tracks demand indemnity against damage suits from clubs running meets it is suggested that a clause on the entry blank releasing the promoter from liability will meet the emergency so far as the contestants go and be readily signed. Proper precautions in the way of keeping the spectators from the fences, such as the wire barriers

employed at the Empire track on these race meet occasions, would really seem to pretty effectively obviate all danger to them.

It seems practically assured now that Eddie Bald will leave the employ of the Electric Vehicle Co., at whose factory he has been for 2 months, studying the mechanism of the Columbia gasoline cars, to drive the Ford 999 in track races and exhibitions. In a trial spin one day last week on the Charter Oak course Bald, inexperienced as he is yet at the track speeding game, drove the Ford flyer a mile in 1:01 3-5. W. H. Piekens, the present owner of 999, who will be his manager, thinks he has found a great champion in the former cycle champion and will seek to match him against Barney Oldfield. The rivalry between the two is likely to make track racing history the coming season. Bald will drive 999 on exhibition mile at the Hartford meet Decoration day, preliminary to touring the country.

The 60-horsepower Fiat international cup model racer, which Claude Fogelin will drive at the Readville meet Decoration day in the free-for-all for the Boston Herald cup, arrived at the Hollander & Tangeman garage Wednesday. Fogelin has tried the machine out a bit on the suburban roads and is highly pleased with it.

Another New York competitor at the Boston meet of which much is expected is the National Higgins 40-horsepower Deereville. Mr. Higgins circled the Empire track with it last Thursday in 1:13 3-5, and later Hilliard, his chauffeur, who will pilot the car in its races, scored 1:11 2-5, the fastest mile of the day, despite the soft condition of the unrolled track.

Barney Oldfield has made engagements to ride at the Philadelphia meet on Saturday and the Boston meet on Monday. After these races he will go west and ride on the tracks there until the eastern track circuit opens in the autumn. He says he will race Eddie Bald and Ford's 999 on any track at any time.

Louis P. Moores denies the story that the 1904 Peerless cup cars will at once have tonnage put on them and be sold as high powered touring cars. He told a Motor Age man on Saturday that they would have their speed shown on the track circuit before they were converted into mere pleasure cars.

W. Gould Brokaw has bought the 60-horsepower Fiat racer, which Fogelin will drive at the Boston meet.

#### BOAT TROPHY COMPLETED

The trophy for the race between Hollander & Tangeman's boat Fiat and Smith & Mahley's Vingt-et-Un has been completed by its makers, Tiffany & Co. The cup weighs 1-132 pennyweights and stands, with the green onyx base, 20 inches high. On the cover is a figure of Victory, with a wreath of laurel in her raised

hand. Around the top of the cup is a decoration of seaweed in green gold, in which are set moonstone, zircons, sapphires and tourmalines, so arranged that any three are either the American or Italian colors—red, white and blue, or red, white and green—the firms giving the cup being agents for automobiles and boats made in those countries.

Clasped in relief on the side of the cup are the private signals of the firms, crossed, and beneath is a decoration of seaweed in green gold. The body is connected with the foot and partially supported by four dolphins. The foot is ornamented with seaweed in green gold. On one side of the onyx base is a miniature model of the Fiat and on the other Vingt-et-Un, both of which were made from measured drawings. On the front of the base, and connected with the boats by a gold band which passes all the way around, is a graceful shield bearing the inscription.

#### PLANS FOR ST. LOUIS TOUR

Augustus Post, of the St. Louis tour committee, has been investigating the road conditions and making contracts and arrangements on the route between St. Louis and Columbus, and will make a report on the roads, garages, engaged, hotels, etc., on his return to New York this week. Frank Mudd, of the Chicago committee, has recently gone over the road between Chicago and Joliet. Mr. Mudd also went over the route from Springfield to St. Louis with Mr. Post and found the roads, although rough, in good condition. Colonel Loose, the committeeman at Springfield, Ill., has rented the Dome building at the state fair grounds as a garage to be used Friday, August 9.

It has been decided that a trail of confetti will be laid the entire distance over the route selected. The manner of laying this trail will differ in some details from that pursued by the managers of the endurance run. Instead of using through pilot cars, the committee has decided to have the confetti taken by special cars from each stop to the next stopping place. The confetti cars will be in charge of local automobilists, who know the road thoroughly to the next stopping point. They will start either the day before the tourists or on the morning of the same day.

The road commissioners of Fayetteville, N. Y., have notified local representatives of the committee that they will make special repairs on the road between Fayetteville and Syracuse just before the tour. They give assurances that this will give a stretch of 8 miles, free from ruts and sharp stones and in as good condition as possible.

Investigations made during the past week by Secretary Butler, of the A. C. A., of the roads to Gettysburg have proved that a change of route between Philadelphia and Gettysburg will be necessary. The committee has taken up this matter and it is reasonably certain that the itinerary for this portion of the Philadelphia-Pittsburg division will be changed. Instead of going through York and Lancaster, the tourists will run from Philadelphia to Reading and Harrisburg and thence to Gettysburg. This will give uniformly better roads and more satisfactory running condition than were the other roads taken.



R. & M. FIAT BOAT RACE CUP

## EXPLORED OLD ORCHARD

### Beach at the Popular Maine Resort Found Suitable for Only Two and Three-Mile Races

Boston, May 23.—It has been proposed by prominent automobilists to make Old Orchard beach, Me., in summer what Ormond is in the winter to lovers of fast driving and racing. Already plans for a week's tournament are under way in which all the prominent racing men of America and Europe will be invited to take part. Reports that H. L. Bowden, of Boston, and S. B. Stevens, of Rome, N. Y., both of whom figured prominently in the Florida tournament last winter, were already matched to race over a 15-mile course on this beach, have been sent broadcast. Up to date, however, no official investigation of the beach has been made to determine its suitability for fast driving with heavy machines, nor, so far as is known, had any test been given that vast stretch of sand by men capable of judging its merits for racing purposes until Sunday, May 15.

On that date George H. Lowe, of the Massachusetts Automobile Club and the Chronograph Club of Boston, accompanied by Walter Schmook, who has had experience in driving fast cars on beaches in both America and Europe, and J. S. Hathaway put in a day there exploring and giving the beach a thorough try-out. The three left Boston in Mr. Lowe's White steamer and drove over the road throughout the night in order to arrive at the beach at low tide, which occurred in the morning at about 6 o'clock. The morning was gray and misty, while a strong northeast wind raked the beach, kicking up a sea and chilling the explorers.

Mr. Lowe and his companions found a stretch of sand 16 miles in length, but cut up so by various obstacles that it would not be possible to obtain a straightaway speedway long enough to hold the proposed 15-mile race between Bowden and Stevens without making turns. A 3-mile course could be laid out and possibly a 5-mile stretch for some of the more daring drivers, but no more. A pavilion runs directly across the beach opposite Old Orchard railroad station and it is this structure with its huge iron posts embedded in the sand at intervals of every 10 yards that spoils the beach for a 5-mile straightaway unless the operators would care to run chances of running their cars at high speed between the iron posts.

On the north of the pavilion there is, however, a smooth, hard stretch of sand 3 miles in length, brought to an end only by a narrow, shallow creek. At low tide the explorers found this to be from 400 to 500 feet wide and as hard as asphalt—so hard, in fact, that the tires of their heavy steam touring car failed to leave the least impression on the sand.

The 2-mile stretch south of the pavilion is

just as perfect. This stretch extends at least 2 miles further but for a straggling group of rocks that makes its way across the beach. If this could be removed the stretch would be the proper course on which to hold the speed trials.

The 3-mile course could not be improved upon. Even under the adverse weather conditions in which the explorers found it, with the heavy mist and high sea running, they were able to glide over it without a jar at a rate of 30 miles an hour. Even within an hour of high tide Mr. Schmook found it possible to pilot his car along at a fast clip high on the beach, where on most sandy stretches it would have been soft and not capable of holding speed. No wreckage obstructs this stretch, and it is free from knolls of clay so often apt to protrude above the surface on northern beaches.

The approaches to the beach are bad at pres-



THE ROCKS WHICH MAR OLD ORCHARD BEACH

ent, but could be easily remedied by making a runway of boards over the soft sand high on the beach. The roads in the vicinity of the beach are all good, while the beach itself so far as scenery goes is one of the most beautiful on the Atlantic coast. Accommodations at the beach in the summer are of the best, there being a dozen first class hotels. It is a popular resort for New England and New York people during the summer months.

Should the automobile tournament there turn out to be a reality it is sure to meet with the hearty support of the inhabitants and summer visitors, and it would have the advantage of being within easy striking distance of the White Mountain resorts and Boston. The roads to Old Orchard from Boston are good as far as Portsmouth, and will be in good condition all the way when they become a little more settled. Even in the rain Mr. Lowe and his party were able to make the trip home in 7 hours. The distance is 131 miles.

### CALIFORNIA MEET POSTPONED

San Francisco, Cal., May 20.—The race meet and automobile show scheduled to take place on the Ingleside track June 3 and 4 has been postponed until some time in August. The racing committee of the Automobile Club of California consisting of L. P. Lowe, chairman, S. G. Bucklee and Charles C. Moore had been preparing the program for the 2-dnys' meeting, and although a great many enthusiasts were anxious to have the affair turn out successfully there were others who said the time selected for holding the exposition and races was not good and they favored a later date

## BOSTON READY FOR MEET

### Big Parade Saturday and Races Monday Causing Unusual Interest Among New Englanders

Boston, May 23.—The automobile parade and races of the Massachusetts Automobile Club, to be held on Saturday and Monday, respectively, will make the greatest automobile carnival ever held in this city, and one which cannot but have a wholesome effect upon the powers that be. The parade promises to be more successful than was at first imagined. Already the entries of some of the best known machines in this section have been received, and many distinguished men and state officials have accepted the invitation to be the guests of the club on this occasion. The route will be through the greater portion of the park system, which has but recently been thrown open to the use of automobilists.

While Chairman William Wallace, of the race committee, has been exceedingly busy with the parade matters, he has not forgotten all about the race, but is keeping his hand in at the racing program. The success of the venture is already assured, not only by the special match between Bowden and Hills, but also from the list of excellent entries received, which include so far Claude Fogolin and his Fiat; Louis P. Moers, C. G. Wridgeway, Joe Tracy and the three Peerless cars; Harry Foslick and the Datsy Bullet; the Deuceville racer; the Pope-Toledo, the Nestrom Spider and a lot of others.

The Boston Herald trophy race is attracting entries. A race arranged yesterday was a special match at the 10-mile distance between Morrison and Eldridge, both of whom agree to use stock Peerless and Pope-Toledo cars, respectively.

The entry of Claude Fogolin, the Italian driver, has also been received and his racing car reached New York Friday morning and will be sent to Boston tomorrow. H. E. Rogers, of Newton; Harlan W. Whipple and several other well-known persons have made entry for the open events, as well as Otto Nestrom, the owner and driver of the Stevens-Duryea Spider.

The touring class race is attracting no end of attention, and will find one of the largest fields of private cars entered, as will also the race open to all members of recognized automobile clubs in New England. The desire to capture this latter race is keen. Wallace is so anxious to win this contest that 2 weeks ago he enlisted for a 30-horsepower car, to be known as Black Beth, which will arrive in this city some time this week.

Harry Foslick has presented a silver loving cup, known as the Foslick cup, to be awarded to the man who shall make the fastest mile of the afternoon, whether it be the first or intermediate mile.



## ONLY THE WESTERN WAY

### California Motorists Persuaded To Stop By Means of Revolvers—Trade Conditions Good

San Francisco, Cal., May 20—Fred Smith and a few other local motorists had a little incident to tell the other day when coming back from a spin out in the country. Smith is a student of the Stanford university and with some friends went out on the roads between Menlo park and Redwood City. When about half of the distance over the route had been run, they caught up with a buggy which had two occupants. Smith tooted, but the stubborn driver in charge of the slow outfit did not budge. The road was wide enough for the car to pass, but Smith did not wish to frighten the horse. A little more tooting, and this was followed by the driver of the buggy flashing a wicked-looking six-shooter at the automobilists. "Don't try to pass or I'll blow your brains out," were the words that reached Smith and his friends. Instantly the automobile was brought to a standstill and the buggy drove on. This incident shows that there are still many horsemen in this state who are very hostile to automobilists.

C. H. Bell, of Los Angeles, made a splen did run some time ago in a Thomas Flyer, and will leave a few days hence to make journey south. "The first night after leaving the southern city it rained heavily," said Mr. Bell. "The roads were something awful, especially between Santa Barbara and Gerioto, but I went through after having to slow up somewhat, and got into a dry gone looking like a frog coming out of a mud hole. During the remainder of the voyage there were no unpleasant happenings and now I intend to return over the route."

L. R. Mead, proprietor of Hyron hot springs, made a trip to the springs last Saturday, returning Sunday. This trip was really one of inspection, as the hotel management desires to establish an automobile road from San Francisco to the springs for Frisco motorists. The distance is 75 miles by way of Livermore, and the roads are level.

Trade continues to be brisk and it would be difficult to say which kind of motor car is the most in demand—the runabout or the touring car. It is not a case of one dealer selling a lot of cars, but all are doing well.

The Pioneer Automobile Co. finally receives by express last Friday a sample of the Olds mobile touring car. President Brinegar says that since the arrival of this machine both himself and his entire selling staff have been working until midnight showing the machine to out-of-town agents and customers who have placed orders with deposits for this machine.

The recently organized California Association of Chauffeurs is doing good work and is at present circulating a petition looking to the blacklisting of operators found guilty of reckless driving. The owners of automobiles are giving the C. A. C. all possible support.

### LICENSED UNDER CONDITIONS

Washington, D. C., May 21—An inkling of what may happen to the sight-seeking automobiles used in this city if it is found they cut up the asphalt pavement during the summer months was given at the district building this week when the commissioners acted favorably on the application of the Seeing Washington

and Mount Vernon Auto Co. for a license to operate one forty-passenger electric vehicle and one twenty-five-passenger vehicle of the same type. The license was granted subject to revocation if it is found that the use of such vehicles causes damage to the asphalt pavements. Whether such damage is caused will be easily determined when the hot weather sets in. When that time comes the officials on the engineer department of the district government will make a study of the matter.

At the present time there are three incorporated companies operating sight-seeking automobiles in Washington, and another one has just been incorporated for the same purpose. It is the Seeing Washington & Mount Vernon Auto Co., which was incorporated by Frank C. Berens, S. B. Emmert and Emile P. Nussbaum, with a capital stock of \$30,000. The company will operate two big electric vehicles and will not only run them around the city but will also carry passengers to Mount Vernon, the old Virginia estate of George Washington, where is located the tomb of the immortal Washington and his wife. Thousands of people go to Mount Vernon every year and the new automobile company hopes to get a good share of the carrying trade.

### MOTOR CYCLISTS TO ORGANIZE

Syracuse, N. Y., May 21—That motor cycling is coming more into public favor is proved by the steadily increasing number of local riders who are taking up the sport and who speak enthusiastically of its pleasures. Definite steps have been taken by Syracuse cyclists toward the formation of a club among the twenty or more devotees of the power-driven machine in this city, and while an organization has not yet been perfected, it is likely that within a short time such a club will be formed. Last year's runs were held to Oswego, Pulaski and other nearby places and it is intended to promote similar tours this season.

### MAYOR FOBES' MUD PATH

Syracuse, N. Y., May 23—Mayor Fobes' automobile outing to the members of the common council and heads of city departments last Friday afternoon and evening turned out to be an endurance run rather than a pleasure trip. The 15-mile trip to South bay on Onondaga lake, ordinarily a quick run, was accomplished only after many difficulties had been encountered. The many difficulties were the bad condition of the 10 miles of plank roads and the 5 miles of dirt road beyond a toll road at that.

The start was made at 4:15 o'clock in the afternoon. Eleven cars set out one after another. The twelfth did not show up, and Mayor Fobes and three of his guests rode in a carriage, and under the circumstances considered themselves lucky. The first party out had two breakdowns before getting through the north end of the city, where sewers are being constructed, and a third at North Syracuse. The last was after all others had passed them, and as the banquet was over at that time, they started to walk back to the city through a pouring rain, reaching a trolley car just as the others were coming into the city in their automobiles.

One feature of the trip was the friendly racing spirit among the drivers and some lively brushes were had. J. A. Seitz, equipped with a repair outfit and who started last, was among the first to arrive, having made the run in 20 minutes.

## GETTYSBURG TOUR PLANS

### Thirteen Cars Already Entered for the Trip to Atlantic City and Pennsylvania Battlefields

New York May 23—Preparations for the spring tour of the Automobile Club of America to Gettysburg and Atlantic City are now complete. The arrangements have been made by Secretary Butler with his accustomed thoroughness of detail. The tour will last 8 days, during which 634 miles will be covered.

Up to this afternoon thirteen members had enrolled their cars as follows: W. Ross Proctor, Renault; Dr. C. T. Adams, Autocar; R. A. Greene, Locomobile; John A. Hill, Panam; Frank G. Webb, Wilton; J. M. Waters, Panhard; M. Milo Redding, Jr., Peerless; W. D. Gash, Ford; Henry B. Joy, Packard; Robert Lee Morrell, Locomobile; Emerson Brooks, Cadillac; R. M. Owen, and E. T. Davis.

The itinerary of the tour, as announced by Secretary Butler after his run over the course last week, is as follows: Thursday, May 26, New York to Philadelphia, 102 miles; Friday, May 27, Philadelphia to Harrisburg, via Reading, 114 miles; Saturday, May 28, Harrisburg to Gettysburg, lunch, 38 miles; Sunday, May 29, morning and luncheon in Gettysburg, afternoon run from Gettysburg to Harrisburg, 38 miles; Monday, May 30, Harrisburg to Philadelphia, 114 miles; Tuesday, May 31, Philadelphia to Atlantic City, 60 miles; Wednesday, June 1, Atlantic City to Asbury Park, 93 miles; Thursday, June 2, Asbury Park to New York, 74 miles.

The headquarters of the tourists at their night stops will be: Philadelphia, Hotel Flinders; Harrisburg, the Commonwealth; Gettysburg, Hotel Eagle; Atlantic City, Hotel Windsor; Asbury Park, Hotel Brunswick. It was originally intended to make the last night's stop of the run at Lakewood, but it being impossible to obtain satisfactory hotel accommodations the change was made to Asbury Park, where the tourists will have a chance to view the notable improvements on the beach, marking the town's release from the thrall of Bradley.

Arrangements have been made for a guide to take members over the Gettysburg battlefield. The park has 25 miles of superb macadam road and cars may be driven to the summit of "Little Round Top" from which an extended view of the battlefield and the surrounding country may be had.

It is expected that the tourists will be escorted by a considerable contingent of fellow members as far as Philadelphia on the first day's run and that a number will meet them at the Hotel Flinders on Monday night, where an informal dinner has been arranged for. Another party is likely to meet the returning tourists at Asbury on Wednesday and accompany them on the run home.

### THUGS STONE MOTORISTS

New York, May 23—In view of the outrageous and unprovoked assault Monday on W. S. Gotschall's automobile party as it was passing through an east side street by a band of hoodlums, during the course of which a stone thrown by a boy, not yet captured, struck Mrs. Gotschall and may cause her death, Police Commissioner McAdoo has responded to the public outcry in the matter by promising that on holidays he will detail po-

liemen to guard the streets leading to and from the Long Island ferries, where these attacks have long been the subject of complaint.

Mr. McAdoo is quoted as having spoken today as follows:

"Many complaints have come from owners of automobiles and dealers to the effect that they have experienced considerable trouble on One Hundred and Fourth, One Hundred and Sixth, One Hundred and Tenth and Thirty-fourth streets in Manhattan, and Fourth avenue in the vicinity of the Thirty-ninth street ferry in Brooklyn, on account of the presence of an unusual number of children at play in these thoroughfares. Missiles have been thrown at automobilists, and general resentment by children and parents has been shown over the presence of the vehicles. The streets particularly complained of lead to the routes most favored by automobilists on Long Island.

"A prominent man visited me to-day and showed an envelope containing six ticks. He picked the envelope up on the roadway in Brooklyn. The ticks were point upward. Such is the opposition to automobiles.

"I appreciate the rights of the children as much as I do the rights of those who ride in automobiles, and to the end that both classes may be served I will talk with Inspector Cortwright and consult with him in reference to choosing several eastbound routes on the upper and lower east side and in Brooklyn which automobiles may best use on Saturdays, Sundays, holidays and other days when there is unusual automobile traffic. The routes will be chosen with a view to advantageous police protection. I propose to talk with the automobile dealers about it, too."

#### WANT ROADS IMPROVED

Pittsburg, Pa., May 23—Automobilists are agitating the matter of having the roads in the famous Sewickley heights district macadamized. At present there is only one macadamized road in the entire district, the one leading from Sewickley to the Country club. At least a half-dozen other roads 2 to 4 miles long in the district are known as the most beautiful drives in Allegheny county and lead by the country places of Pittsburg's wealthiest men. Last year a movement was started to have them macadamized, but nothing came of it. This year both the automobilists and the property owners are determined to have some of the work done, and it is thought that the Glen-Mitchell road and the Little Sewickley creek road will be improved before fall. In their present condition the roads are muddy in winter and rough in summer, making them unfit for automobiles. If they were macadamized the district would become a favorite rendezvous for the automobilists both from Sewickley and Pittsburg who are now deprived of the beautiful scenery.

The practice among business men of driving into town in an automobile and having it stored during the day is increasing rapidly. Two years ago hardly a business man could be seen downtown during the day time, many of them fearing to drive the big machines among the crowded streets. Now over fifty of the most wealthy motorists in the city make regular trips to town in the morning, have their machines stored during the day and after business hours take a spin around the boulevards on their way home. As fast as improvement of the roads goes on, so will motoring be popularized.

## ROAD RECORDS GO AGAIN

### Times from Boston to New York and Return Receive Another Drubbing from Fosdick

Boston, May 23—The Boston-New York Boston record, established some 2 years ago by Kenneth Skinner, has been fractured and likewise the one-way record recently established by R. A. Green. Both these marks fell during Saturday and Sunday, Harry Fosdick enacting a revision of the record table. C. A. F. Phizzenmayer, of New York, also got into the record-making game and established a new New York to Boston mark, the same being done yesterday morning.

Fosdick's elapsed time to New York was 10 hours 20 minutes, and the actual running time 8 hours 54 minutes, which improves upon the Green record by 7 minutes, and the gain was made at different points along the route. The elapsed time to New York was 3 hours 2 minutes better than the record established by Skinner 2 years ago, while the elapsed time of 21 hours 55 minutes for the round trip made by Fosdick is 13 hours better than the best previous performance, the actual time for the return trip from New York being 9 hours 53 minutes running time, and 10 hours 24 minutes elapsed time.

Phizzenmayer has a mark of 10 hours 25 minutes elapsed time and 8 hours 42 minutes actual running time, which beats both the Green and Fosdick records for one way, but from his elapsed time has been deducted certain times he lost while making an unintentional trip to Munson, which is off the direct road to Boston from New York, and which caused him some time.

The record work commenced at 12:35 o'clock Saturday, when Fosdick, accompanied by Fred Shaw, left Boston after being checked by H. A. Gilthes, and headed for New York. The going was fast, but the Winton car was equal to the task and reached Worcester at 2:03 o'clock. Here a loss of a couple of minutes was made on account of having to stop for a trial, but this time was not deducted from the elapsed time. From Worcester to Springfield the same pace was continued and the heart of the commonwealth reached at 3:50. Sixteen minutes were lost here in getting gasoline, the party being checked by Frank Fowler and H. T. Farr. At 4:06 the pace was renewed. Five miles this side of Hartford the car broke a front spring and Hartford was reached at 5:10 o'clock. Here 45 minutes was lost in changing springs, a new one being secured by dismantling a new stock car, and at 5:55 the party was again on its way to New York, reaching New Britain at 6:23, Meriden at 6:50, and New Haven at 7:35. At New Haven 20 minutes were taken out to replenish the oil and attend to the lamps, and at 7:53 the run into New York was started.

Bridgeport was reached at 8:35, the party here being checked by J. H. Meddough, of Boston, who happened to be in that city. Five minutes were taken for refreshments at Bridgeport, this being the first time the record breakers had had an opportunity to get a mouthful. Central bridge was reached at 10 hours 55 minutes elapsed time and 8 hours 54 minutes actual running time, so that both the elapsed and the actual time records were

reduced. The arrival at New York was checked by Mr. Phizzenmayer and Percy Owen. The party then went across the bridge to the hotel and got a little lunch, coming out in season to check Mr. Phizzenmayer when he started for Boston at exactly 12 o'clock. Six minutes later Mr. Fosdick started back home, and although he had constant signs of Mr. Phizzenmayer being in front, he never saw him after he had started.

Mr. Fosdick reached Bridgeport on the return at 2:35 and New Haven at 4:05. He left the latter place at 4:20 and reached New Haven at 4:05. He left the latter place at 4:20, stopping 15 minutes to replenish oil and attend to his lamps, reached Hartford at 5:50 and Springfield at 6:45. Springfield saw another stop of 5 minutes, and 11 minutes more added to the amount of elapsed time at Worcester, which was left at 8:50. The run to Boston was made in good order, and Mr. Fosdick reached here at 10:24, the time for the last half being 9 hours 53 minutes, and the elapsed time 10 hours 24 minutes, which gives him for the round trip the elapsed time of 21 hours 55 minutes, and for actual running time 18 hours 47 minutes.

Mr. Phizzenmayer's ride to Boston on his Locomobile must not, however, be overlooked, since it is deserving of considerable credit. The trip was caused by a little side bet, he having gone out to Central bridge, New York, to check Mr. Fosdick. Phizzenmayer left New York exactly at midnight and did not stop until he reached Westbrook, where he spent 45 minutes attending to the wants of the inner mortal as well as replenishing gasoline. Thirty minutes more were lost at Hartford, and the remainder of the time deducted from the elapsed time to get the actual time was lost on account of the New Yorker's going into paths that were not on the road, or, in other words, making unnecessary side trips. He reached Boston, being checked at the B. A. A., at 10:25 yesterday morning, that time being his elapsed time, from which was deducted the time lost, giving an actual running time of 8 hours 42 minutes, which is better than is claimed by either Green or Fosdick. This was Phizzenmayer's first attempt at record breaking, but from the showing he made it is not the last.

#### PARADE READY TO MOVE

Cleveland, O., May 23—The committees of the Cleveland Day Nursery and Free Kindergarten Association and the Cleveland Automobile Club have announced the route and arrangements for the street parade to be held in connection with the automobile carnival on June 8. The parade will start at the corner of Euclid avenue and Perry street and pass down Euclid to the Public square, pass around the Public square, out Superior to Erie, then to Euclid, thence to the Boulevard, and finally to the Glenville track, where the cars will pass the grandstand four abreast. The first division will be composed of electric vehicles, the second division of runabouts of all powers, the third division of light touring cars, the fourth division of heavy toning cars and the fifth division of mercantile wagons. The procession will move at 1 o'clock. Mayor Tom L. Johnson will head the parade as chief marshal, assisted by Ralph Owen. Walter Baker will direct the first and second divisions, and George S. Waite and Clarence Brockway the third, fourth and fifth divisions.

## RENTING TRADE BRISK

### Ohio Companies Establish Lively Trade in Pleasure Cars for Hire —New Explosive Tried

Cleveland, O., May 23—Renting of automobiles has developed into quite an industry in this city. A couple of years ago two or three local dealers attempted to conduct rental departments in connection with their business, but it did not prove successful. The demand was not heavy enough to warrant keeping cars in commission for such service, primarily because the business was not properly advertised and because prices were too high. This spring two concerns have been formed that are making an exclusive business of renting cars and they seem to be making a success, as they have gone about it in business-like manner.

The Cleveland Automobile Transfer Co., W. B. Brown manager, has four Winton touring cars in constant commission and they are kept busy a greater portion of the time. The J. M. Reed Auto Livery operates Stearns cars seating five passengers and is also doing a good business. Mr. Brown has an arrangement with the Hollenden hotel whereby orders for rigs are taken at the desk, while Mr. Reed has a similar arrangement with a Bond street pharmacy. Both concerns have their "stamping ground" in the vicinity of the Hollenden hotel and machines bearing a sign "This Car for Rent" may be found at that point at all times. Sometimes the competition for business is rather keen and the coppers for the two concerns have rather heated arguments about the advantages and disadvantages of cars with or without tops; or the superior speed and reliability of this or that car. Both concerns have the same scale of prices—\$5 for the first hour and \$4 an hour thereafter or \$10 for a park drive covering the afternoon.

A great deal of interest is being evidenced by local operators dealers and manufacturers in a series of tests being made with the new fuel known as Energine. As has been previously stated in these columns this fuel is being manufactured by the Energine Co., which was formed in this city some months ago. Lately the company has completed a refinery and is now producing about 200 barrels of the product per day. A number of the local dealers have been supplied with the fuel and are selling it to local patrons, and the reports coming from people who have been using the product for every day work indicate that claims for Energine are being substantiated.

The new fuel is a laboratory product, petroleum of course being the base. It is more highly refined than gasoline. It lacks the oily appearance and feeling common to nearly all grades of gasoline and it leaves no odor or carbon after being exploded. The manufacturers claim that the explosive mixture produced is much more powerful than that derived from gasoline and, although the product costs more than gasoline, it is claimed to be more economical in the long run.

An interesting test was made with Energine the other day by H. H. Magoon, agent for the Pope-Toledo. He used a Pope-Toledo two-cylinder car and first covered a certain course through the parks and boulevards using 68 test gasoline. He then cleaned out the tanks and went over the same course in practically the same time using Energine. In the first trip

he used 10 pints of gasoline and on the second trip 6 pints of Energine, which would indicate a saving of 40 per cent for the Energine. He stated that immediately after starting with Energine he had to cut down his carburetor and he noticed that the machine seemed speedier and livelier than before. Mr. Magoon has supplied the product to several customers, who are greatly pleased with the results.

Even better results were shown for Energine in tests made by the Ohio Motor Car Co., which reported a saving of 42 per cent in the amount of fuel used as compared with 68 test gasoline.

The Energine company plans to erect refineries in other cities and claims that the demand already indicates a great future for the product.

### NEW SYRACUSE COMPANY

Syracuse, N. Y., May 23—As a result of negotiations which have been going on for a year, announcement is made by the chamber of commerce that wealthy New York men are likely to come here and build a mammoth plant for the construction of motor coaches of the automobile type for passenger purposes, special vehicles being manufactured for hotels, railroad stations and sightseeing purposes.

The offer to locate in Syracuse is made on condition that local capital to the amount of \$100,000 be subscribed for the erection of a factory, the subscribers to receive in return 6 per cent gold bonds. The New York banker agree to supply all the working capital, patents and designs, sell their own stock and furnish funds for that expenditure. It is understood that the capital will be large. None of the coaches to be built will sell for less than \$10,000.

Officers of the chamber of commerce are hopeful that the desired amount for a building may be raised. The matter will be brought up and determined at the next meeting of the organization. In case the company locates here it is specified that a plant of sufficient proportions to accommodate 500 workmen be built. There must be ample room for any future growth of the concern in the way of land for additional buildings, and also there must be good switch connectors with the railroads. The company proposes to start work with 100 men, and the vehicle which it proposes to build, it is said, will be larger than any similar vehicle in the world. One model is called the Standard passenger coach, a double-deck affair to carry between thirty and forty passengers and operated by electricity or gaso-electric power. The company is said to be willing to guarantee that all the money derived from the sale of bonds will be used exclusively for the erection of a plant.

### BRITISH EXPORTS AND IMPORTS

Official statistics show that during the first 4 months of this year 1,924 motor cars were imported into Great Britain. Their value amounted to about \$3,141,440, or an average of \$1,632 per car. During the same period only 217 British-made vehicles were exported, and their value was about \$441,320, an average of \$2,034 per car. Motor cycles to the number of 437, valued at \$73,855, or an average of \$192, were imported, while a total of 265, valued at \$50,915, or an average of \$192, were exported. The value of parts imported during the first four months of 1914 was \$39,552, against \$10,185 worth of exported parts.

## ROAD CONVENTION OVER

### Meeting at St. Louis Adjourns After Adopting a Platform and Electing Officers for the Year

St. Louis, Mo., May 23—The national and international good roads convention is over. It adjourned after 6 days of conscientious work in favor of better roads, and it after this noticeable improvements are not made it might well be asked what must be done to get the people who are in a position to help this movement interested in road improvements.

Never have so many eminent men met for a common cause; never have the addresses of these men been so serious, so earnest, so logical. The fact that several of the nation's highest officials took an active part in this meeting seems to indicate that the unceasing efforts of the good roads officers will be rewarded by the participation of the government in the movement.

The last day of the convention was noticeable for two events—the election of officers and the adoption of the platform. The old officers were unanimously re-elected, as follows: President, W. H. Moore, St. Louis; secretary, W. H. Richardson, Nebraska; treasurer, C. H. Hattig, St. Louis. Besides these officers the following members form the executive board: Elbert Durand, Chicago; Albert Blair, St. Louis; Russell Harding, St. Louis; A. S. Munn, Florida, and Martin Dodge, Washington, D. C. The following platform was adopted:

The National Good Roads Association of the United States, in national and international convention assembled, believing that the improvement and maintenance of our public highways is of paramount importance to the economic welfare and development of our country,

Resolved, That this convention heartily indorses the proposition of federal aid for the construction of public roads in the United States to the extent of one-half of the cost of same, and that each delegate in this convention pledges himself to use all honorable means to secure the support of our respective delegates in congress of this principle.

Resolved, That, believing, as we do, that the road question is a paramount one now before the American people, we urge that in the election of all public officers they be required to stand for federal aid for road improvement generally.

Resolved, That this convention unanimously indorses the proposition of county, state and national aid.

Resolved, That we heartily approve and commend the work of the office of public road inquiries of the United States department of agriculture in collecting and disseminating information and co-operating with committees in object lesson and experimental work. We believe that its incentive of road building has been far-reaching and will prove of immeasurable value to the people. The demand for better methods and greater light is insistent and general throughout the country. While the office has accomplished a prodigious amount with the limited means available, it has not been able to respond to more than an insignificant fraction of the demand. It is a lack of knowledge that all the people want and it is pre-eminently proper that the government should furnish it.

We therefore earnestly demand on behalf of the people that congress at its next session appropriate not less than \$150,000 for this office, in order that it may be able at once to increase its facilities for this vitally important educational work.

Resolved, That we recommend that the office of public road inquiries should be advanced to a bureau, to be known as the bureau of public roads and that as increase in the appropriation of money applicable should be made commensurate with the demand of this office.

Resolved, That it is the sense of this convention that all convicts and vagrants shall be en-

played in work upon the public roads and highways, and not in competition with honest labor, as at present.

Resolved, That the delegates appointed to this convention be appointed by this convention as a committee to organize in the different states and territories not already organized county and state organizations as the primary organization to this body.

Resolved, That the thanks of this convention be due, and are hereby tendered to the press for their practically unanimous aid in behalf of the work of the "good roads" of our country. Without their great interest in our work our efforts would not have borne the present fruit.

### HARRY GEER KILLED

Harry R. Geer, of St. Louis, died last Sunday as the result of an accident 4 days previously in which Mr. Geer while riding a motor bicycle collided with a wagon.

Mr. Geer was but 27 years old and was one of the pioneer motor cyclists of this country, having graduated from the ranks of the eldest exponents of cycling. Recently he had built up a motor cycle jobbing and manufacturing business in St. Louis and had become known as the "motor cycle man." He was well liked throughout the trade and being a hustler and an enthusiast, his business gave prospect of a rapid growth.

The funeral was held Sunday at his home, 3808 Hall's Ferry road. Mr. Geer leaves a wife and one child.

### FIELD FOR BUSES IN THE SOUTH

"Motoring, while practically in its infancy the world over, is in its swaddling clothes down in Dixie," remarked Frank T. Reynolds, editor of the North Georgia Citizen of Dalton, Ga., to a Motor Age representative. "Review the acknowledged advantages possessed by better highways in the more densely populated sections of our great country, you have suburban competition in electric railways. Of course all cities and towns of any pretension down our way have these latter and some of the former, but most of the cities and towns with us have physically natural conditions that will average better than with you.

"Now the point I wish to make plain is that there are many, very many, communities down there in which lots of money can be made on small capital by some one familiar with the automobile to run omnibuses and transfer lines. I have in mind two places, one of 15,000 and one of 6,000 population, in which a young man with say a 10 horsepower automobile, seating four people, can do a land office business 11½ months in the year. He can do it hauling passengers from and to certain places in no case exceeding 2 miles.

"A friend of mine in a Georgia city of 40,000 bought a steamer to carry four for his own pleasure. The city being an almost perfectly level one he devised a trailer of automobile wheels and axles which he hooked on his automobile and he accommodates ten passengers and travels faster than the average horse. This can be done in a great many places in the south. So you see what an opening there is for many young men of small means. If you know of any who desire to look into the matter I will take pleasure in putting them in communication with reliable, responsible people. We have so many towns of 5,000 to 10,000 population down there that are without adequate intercommunication and which cannot afford electric railways and which would not pay, that offer splendid opportunity for automobile service."

## SECOND ONLY TO PARIS

### St. Etienne, in France, a City With Thousands Working On Automobile Manufacture

St. Etienne, France, May 3.—It is strange that when one asks a foreigner something about automobile centers in France he will invariably mention Paris, Lyons, Bordeaux, Marseilles, Lille, Rouen and a few other large places. Paris is of course the center, not only of France but of Europe, but if it comes down to the manufacturing part of the industry St. Etienne is, next to Paris, the most important town, and there are even many people who claim it is ahead of the metropolis.

St. Etienne is to us what Coventry is to England and Detroit and Cleveland to America. There are more factories located here engaged in the manufacture of automobiles or parts than almost all the other automobile concerns of our country put together, and when the large number of other manufacturing factories is taken into account, this city has no rival in France.

Being only an hour's railway ride from Lyons, and not far away from Grenoble and Dauphine, it has multiple connections with these important cities, located in one of the most populous parts of France. When taking the railroad trip from Lyons, the traveler would be amazed at the number of factories located all along the road. Steel and iron works are followed by silk mills, bicycle factories, automobile plants, coal mines, lace factories and glass works. There is hardly a quarter of a mile all along the road that does not have some kind of factory.

The most important of the factories in this locality, and very likely one of the greatest in the world, is the Manufacture Française d'Armes et Cycles de St. Etienne. It occupies an immense piece of ground, has thousands of employees, and machinery of the very latest design. As the name indicates, firearms and bicycles are its products. The other big concerns here are the following:

Société Anonyme de Constructions Mécaniques de La Loire, manufacturing automobiles and fittings.

Les Forges et Acieries de la Marine et d'Homécourt, located at St. Chaud, a suburb of St. Etienne, making steel frames and sheets for motor cars.

Société Anonyme des Etablissements Jussy, manufacturing motors and automobile fittings.

Société Manufacturière d'Armes, Cycles et Automobiles, manufacturing automobiles, bicycles and weapons.

There are many others, but these are the most important. It cannot be ascertained how many people are employed in all the factories and plants, but officials of the city say there are over 50,000. About 100,000 bicycles and 15,000 cars are built here during the year, and when the side lines are added the amount of business transacted during the season amount to over \$20,000,000.

### CADILLAC CO. HUSTLING

Detroit, Mich., May 23.—From out of ashes the Cadillac Automobile Co. has risen almost Phoenix like. Work on the buildings has been going on with remarkable activity and the company is now turning out machines almost as fast as before the fire, but a little more than 5 weeks ago. Before the plant was destroyed

the company was turning out twenty-five completed machines each day. President Black said yesterday that they are now turning out twenty machines a day in the part of the plant which has been rebuilt and in the various factories which were temporarily leased. "Our greatest difficulty has been to duplicate the small parts which we made ourselves," said one of the directors. "We have satisfactorily solved the problem, however. We are now almost up with our orders. Inside of 10 days we will be turning out thirty machines a day—more than we have ever turned out before. At that rate we will be up with our orders in a very short time."

### SCORE IN PROVIDENCE

Providence, R. I., May 21.—One of the surprises of the trade here has been the rapidity with which new automobiles have been establishing agencies, and in one of the garages the other day two interested men made up a list of the machines that now represented in Providence. They found that there are twenty-one different makes which have agencies, and almost all are doing some business. Nine machines have come this year. All of the following cars had agents before this year: Pope-Toledo, Cadillac, Knox, Locomobile, Autocar, Winton, Peerless, Oldsmobile, Columbin, White, Stanley, and Waverley. The following have come here this year: Pope-Hartford, Stevens-Duryea, Ford, Rambler, Cameron, Reliance, Northern, Georges Richard-Brazier.

### INSURANCE IN CLEVELAND

Cleveland, O., May 23.—The automobile liability policy is one of the latest forms of insurance brought out by the leading accident insurance companies. Frank Wilson, a well known automobilist who represents the Aetna Life Insurance Co.'s accident department, is giving the new form of insurance considerable attention and he believes there is quite a field for such insurance. In cities like Cleveland where there are a great number of automobiles, accidents frequently occur and in case of injuries the owners of automobiles are frequently liable for damage suits. It is to protect against such damage suits that the new insurance is intended. The premium varies according to the type and power of car. Based on 12-horsepower cars the figures are \$40 for an electric, \$60 for a gasoline and \$100 for a steam car. Where a party or firm owns and insures more than one car, the additional cars are insured for half the amounts mentioned. The company employs inspectors and in cases of accidents the circumstances are investigated and if they indicate liability to the party insured, steps are taken with a view to a settlement of the claims.

Should legal proceedings be taken the company takes charge of the defense of the case and defrays the law costs and pays any damages that may be awarded.

The value of the insurance was demonstrated in a recent case where a local operator ran into and injured an Italian laborer. Some lawyer took up the case and brought suit, which might have proved expensive to the owner had not the insurance company taken charge of the case. In some manner the insurance inspector learned that the Italian had a hankering to see sunny Italy again, so the company bought the man a suit of clothes and a ticket to Italy and obtained a release from all damages, thus saving the owner a bill.

## AFFAIRS OF THE CLUBS



Something like half of the members of the Chicago Motocycle Club are shown in the illustration at the hour of starting upon the club's run to Fort Sheridan and back last Sunday. The start was made at 9 o'clock, Captain Koeppe and President Ayers heading the line, with Mr. Wagner, of St. Paul, Minn., and Mr.

Hunter, of Hammond, Ind., as guests of honor. The official rendezvous at Evanston was visited and inspected on the way out. Hubbard's hill was easily negotiated by all machines and Highland Park was reached in time for dinner at the hospitality of Mayr Evans, who, by the way, has been persuaded to join the club.

**Club in Muskegon**—Motorists of Muskegon, Mich., are planning to form an automobile club.

**Daytonians Out**—The Dayton Automobile Club, Dayton, O., gave its first club run for the season of 1904 last week. Fourteen cars carrying thirty-six persons took part in the affair.

**Forty Clubs in Germany**—There are forty automobile clubs and organizations in Germany, among them the Vereinigung Sachlicher Automobilbesitzer, of Dresden, and the Officier-Selbstfahrer-Verein der Verkehrstruppen, of Berlin.

**Named Committees**—President W. S. Kilmer of the Binghamton Automobile Club, Binghamton, N. Y., has named the following members to compose the new legislative committee of the club: C. E. Titchener, chairman; D. A. Smith, Harry Barrett, R. W. Whipple and W. H. Lockwood.

**Fifty New Ones**—Twenty-five regular members and twenty-five special members from the Evanston Boat Club, were admitted into the Chicago Automobile Club at its meeting last Tuesday evening. The Evanston club house will be formally opened next Saturday, and the occasion will be used for a club run to the Chicago suburb.

**Camille Has Title Role**—Sixteen automobile owners of Terre Haute, Ind., met last week and organized the Terre Haute Automobile Club. Camille Urban was elected president; Dr. Joseph Weinstein, vice-president; John S. Cox, secretary, and Fred Heisl, treasurer. The first club run will take place next week, the destination being Rockville.

**Wants a Speedway**—The election of officers of the Detroit Automobile Club, Detroit, Mich., took place last week. President Fred O. Paige was re-elected unanimously. The other officers named are: Russel A. Alger, Jr., first vice-president; C. A. Ducharme, second vice-president; De Witt Loomis, secretary; L. H. Case, treasurer. Three new directors were elected—Willis E. Buhl, C. A. Ducharme and L. H. Case, who succeed Fred L. Smith, William E. Metzger and George Kenney. Secretary Loomis reported that the membership list had almost reached the hundred mark and that the conditions of organization were satisfactory. E. S. George, chairman of the good roads committee, reported that the members were hard at work preparing the map showing

the roads in southern Michigan. When completed a handbook will be issued, which will contain much valuable information for tourists. Description of roads in every county will be found therein. Within a short time a map showing the roads to Elkhart, Ind., will be completed, and with the already known road from the Indiana town to Chicago, Detroit motorists will find full details and information for a tour to Chicago. The president referred to the recent unpleasant happening in Birmingham, Mich., and stated that members should take notice that the speed ordinance in that locality is 6 miles an hour and should be strictly observed. Harry B. Joy, of the Packard Motor Car Co., wrote a letter which was read at the meeting. It pointed out that there was no place in Detroit at present where owners could speed their machines and the suggestion was made that the matter be placed in the hands of the legislative committee to arrange that a part of the boulevard might be used for the purpose.

**A Policeman's Joke**—The second annual automobile parade arranged by the Louisville Automobile Club, Louisville, Ky., was held Saturday. Seventy-eight cars of various styles took part in the run, which attracted thousands of spectators along the line. An automobile bus seating sixteen persons was used by the band and in another large passenger car a dozen bluecoats, each with a "guess-the-speed" automobile watch in hand, were trying to find out "accurately" how fast the parade was moving. One was overheard to remark to another: "Gee whiz, Bill, isn't that swell! We're going so fast I could count the feathers on that woman's head."

**Referred to the Law**—The Automobile Club of Philadelphia, Pa., has taken up the case of one of its members, Samuel Bell, Jr., who was recently fined for driving his car at more than 10 miles an hour in the township of Radnor, and who appealed, having his act upon a law passed by the legislature in 1903 which fixed the speed limit at 8 miles an hour in cities and boroughs and 20 miles an hour outside city and borough limits.

**Going to the Races**—The Rhode Island Automobile Club, of Providence, R. I., will hold a run to Readville Decoration day, and this will be the second run of the year. The members are going to see the races that have been arranged by the Massachusetts Automobile Club, and if the weather is kind it is expected

that over forty machines will be in line. The party will go to Sharon, Mass., where lunch will be served, and after that the journey to Readville will be resumed.

**Passed Half-Century**—The Louisville Automobile Club, Louisville, Ky., which was organized in April, 1903, recently passed the fifty membership mark.

**Want Speed Limit Raised**—Residents of Oak Park, a suburb of Chicago, are in favor of having the present speed limit of 8 miles an hour increased to 12 miles. At the next meeting of the village board the matter will be discussed.

**Club at Geneva, N. Y.**—At a meeting of motorists of Geneva, N. Y., and at which S. C. Tallman, of the New York State Automobile Association was a guest, the Geneva Automobile Club was formed and the following officers were elected: H. L. Rose, president; M. F. Blaine, vice-president; Charles Fairfax, secretary and treasurer. Application for membership in the state association will be made.

**Farmers Interested**—The Granite State Automobile Club, of Manchester, N. H., had its first run of this season last Sunday. Eleven vehicles carrying about thirty passengers took part in the run which was to Concord and return. The condition of the roads was good and there were no accidents. The country people came in large numbers to different points along the road to watch the procession.

**Against Scorching**—Members of the Milwaukee Automobile Club have placed the mark of their disapproval upon scorching. At the last meeting of the club held at the Hotel Pfister resolutions were adopted condemning the practice. A committee consisting of Dr. Louis Fulsimer, James T. Drought and U. W. Iverson has been appointed by the club to make arrangements for the auto show which it is proposed to hold in August. A large number of new members have recently been added to the Milwaukee organization.

**St. Louisians to Organize**—A long time ago there was considerable interest among St. Louis motorists in an organization, but that seemed to have died out somewhat in the excitement over the fair. The subject of a new organization is now being considered, the need of an organization in the city of the world's fair having of late been more apparent than ever. The motorists of that city

have been subjected to abuses that would not be permitted if a live organization existed. There is much work that can be done in matters of legislation, road improvement, tours, etc., that would keep a club and its officials pretty busy for several years to come.

**Elected New Officers**—The Automobile Club of Pittsburg has elected these officers for the next year: President, W. C. Temple; first vice-president, James Francis Burke; second vice-president, W. H. Nimick; third vice-president, Edward Kneeland; treasurer, Renben Miller, Jr.; secretary, W. Linford Smith. W. L. Elkins, W. J. Lewis and Dr. John A. Hawkins were elected a board of governors to serve until May, 1907. From now on during the season the club will hold regular fortnightly meetings.

**Race for Members**—At a meeting of the board of governors of the Automobile Club of Philadelphia, held Thursday, George T. Lip-

pincoff, of Atlantic City, offered a cup to be competed for by members of the club in a handicap run to Atlantic City, the winner of the run to become the possessor of the cup.

The offer was accepted and the committee on tours and runs appointed to take charge of the contest. The contest is open for members of the club only, and is open to all classes of vehicles. A car must be in full touring trim and carry the maximum number of passengers the car is designed to carry. The event will be held Saturday, June 11, and the winner is to be the member making the trip from the Pennsylvania ferry, Camden, N. J., to Atlantic City in the shortest time.

**Club Favors Low Speed**—The Automobile Club of Pittsburg, Pa., went on record at its last meeting as favoring the rigid enforcement of the speed ordinances. Director of Public Safety Moore asked that action be taken and the matter was referred to a com-

mittee and later the following resolution was adopted: "That the Automobile Club of Pittsburg puts itself on record that each and every member of the organization will not only comply with the regulations concerning the speeding of automobiles, but will use his influence to enforce the laws of the commonwealth covering the same; the secretary is hereby instructed to mail to each member of the organization a copy of said law, and a vote of thanks is extended to the director of the department of public safety of the city of Pittsburg directing attention to the matters referred to." The speed limit within the city limits is fixed at 8 miles an hour. Without the city limits the limit is 10 miles an hour, providing that all reasonable precautions shall be taken on sharp curves, heavy grades, etc. No accidents have resulted thus far and the club is determined that for the good of automobiling the laws shall be enforced.

## FROM NEW YORK TO ST. LOUIS

The thousands of motorists who contemplate touring from New York to the St. Louis exposition this summer will be interested in reading an account of the conditions and trials encountered by three amateurs who left Gettysburg last week with St. Louis as their objective point. The tourists are Percy F. Megargel and William S. Harrison, of Rochester, N. Y., and Ralph G. Megargel, of Scranton, Pa., the two former newspaper men and the latter an old-time advocate of the steam class of vehicles who is making his first experimental trip with gasoline as the motive power, an Elmore being selected for the journey. The three occupants attired from head to foot in leather, each supplied with a 38-calibre hammerless, looked prepared to journey to the end of the earth.

The start was made from Forty-second street, New York, leaving the garage of the Richmond Automobile Co. shortly after noon and taking the ferry to Weehawken. The hill at that place proved steep, but was well paved and we went up the greater part of it on the high gear, the signs on either side "New York to St. Louis" attracting attention.

At Fair View we encountered a toll gate, with a notice reading: "Automobiles 10 cents." Upon stopping to pay, the man inside the ticket window informed us that no toll was charged motorists and to run right through all toll gates en route, as automobiles were considered a benefit to the road. This might have been true, but later we were informed that the charter read "toll to be charged all drawn vehicles."

After passing through Arcola, some 16 miles from New York, following the white arrows erected for the endurance run, we ran up against our first snag. It was a high board fence erected entirely across the highway without notice telling why. An investigation revealed the fact that the bridge to Ridgewood was down and a long detour was necessary in order to get across the stream.

The road through the New Jersey towns, and in fact from New York to Newburg, were in perfect shape and we bowled along at some places at remarkable speed. Horses met on the road within 50 miles of New York city paid not the slightest attention to the automobile and it was not until Newburg had been passed that domestic animals showed alarm.

While we were attired in leather from head



to foot, we carried extra suits of clothing in one of our hampers, intending to don them when making our appearance in the hotel dining room. Our intentions were all right, but upon taking out the clothing at the conclusion of the first day's run, we found it such a mass of wrinkles and creases as to make it entirely useless until pressed, and after the first day we appeared three times a day attired in leather and probably attracted no more attention than any three young men would who drew up in front of the hotel in an automobile bearing two placards reading: "New York to St. Louis."

Just before we reached St. Remy, on the way to Kingston, it commenced to rain. We pulled on our rubber coats, stuck to the machine and our trouble commenced. We had neglected to bring a supply of rope to bind our wheels and we slipped from one side of the road to another in a vain attempt to keep out of the deep wagon ruts in the clay soil. After being fairly successful for a fraction of a mile we landed with a crash into the deepest ruts along the course. Expecting to find many things broken we hastily descended and standing in the mud several inches thick watched the wheels run around in the ruts without touching bottom while the two axles and the machinery rested on the ground between the wheels.

It was at this point we congratulated ourselves that we had a 1,200-pound machine in-

stead of one in the 2-ton class, for by uniting our strength we were able to lift the rear wheels out of the rut and place them on high ground, repeating the operation on the front wheels. A careful examination showed no further damage than a bent mud gear and a chain clogged with mud, and we proceeded on our journey westward, arriving in Kingston without a mishap.

Of all the roads encountered on the trip the streets of Kingston were the worst. It was bounce, bounce, bounce, until the inevitable happened and a spring snapped. Upon visiting a blacksmith to have the left wheel we found four other light vehicles awaiting their turn to have springs repaired and were informed that this was an everyday occurrence and had been for years, owing to incompetent road commissioner.

In leaving Kingston we ascended the mountain to Stony Hollow, on what is known as the rock tramway. This is made of huge stones laid far enough apart to allow standard gage wagons to have continuous pavement underneath their wheels. Loads of stone weighing 8 to 10 tons are hauled over this tramway from Stony Hollow to the boat landing at Kingston. The wear on the stones is tremendous, and, hard as the roadway is, ruts 3 and 4 inches deep are soon worn into the stones, making a track that when once is, is difficult to get out of, especially with an automobile on a wet day.

When the state road was encountered a few miles further on, we felt at peace with the world and our machine glided along at any speed we wished. At Phoenicia we met the Ulster county road commissioner and had an opportunity to thank him personally in the name of the automobilists generally for the excellent state roads he maintained in his county. The commissioner, George E. Jocelyn, was pleased with our words of praise and said it was his object to have the best roads in the United States and with that object in view the county had already raised \$659,774, which the state doubles. The Ulster county commissioner has long urged the adjoining county of Delaware to meet them at their county line with good roads, making a continuous highway of fine macadam roads through the two counties. Delaware county is backward in road building and thus far has only spent \$54,320 for state roads.

**EDITOR'S NOTE**—This is the first of a series of articles by W. S. Harrison.



## GOSSIP OF THE GARAGES



INOK BUILDING AT FAIR GROUNDS, SPRINGFIELD, ILL., WHICH WILL BE USED AS A GARAGE BY PARTICIPANTS IN ST. LOUIS TOUR

**After Queens**—Hornae B. Day went to Detroit last week to secure shipments of Queen cars to supply the New York demand.

**Coming Decoration Day**—The first of the Fiat side-entrance tonneaux is expected by Hollander & Tangeman, New York, May 30.

**Famine Broken**—The Oldsmobile famine in New York was broken last week by the receipt of twelve runabouts and four tonneau touring cars.

**Electric in Newport**—The Pope agents in Providence, R. I., say they are selling a great many Waverleys in Newport, while in Pawtucket the Cadillac business is better than formerly.

**In New Building**—The Pittsburg Automobile Co., formerly the Keystone Automobile Co., is now fully settled in its new building in Center avenue, East End, Pittsburg, Pa. N. W. Vester is manager of the company.

**Track in Garage**—What is considered one of the finest garages in Canada was recently opened in Montreal. It belongs to the General Automobile Co., and has a floor space of 244 by 80 feet, clear of posts, and with a tenth of a mile covered track.

**Haynes in Philadelphia**—Thomas Rose has secured from the Brooklyn Automobile Co. the Philadelphia agency for the Haynes Apperson. He will open a spacious garage for its sale and care in North Broad street. Mr. Rose ordered twenty cars for a starter.

**Packard Takes Offices**—A. P. Shumaker has established a new agency for the Packard machines and has opened a fine suite of offices in the Park building, Pittsburg, Pa. He has already made a number of good sales and is doing considerable demonstrating.

**With Factory Facilities**—The Pope Mfg. Co. has established a garage in connection with its automobile salesroom and Crescent bicycle factory at Wells and Schiller streets, Chicago. On account of the factory facilities at hand a specialty will be made of difficult repair work.

**Elizabeth Has Cars to Rent**—The business of the Elizabeth Auto Co., of Elizabeth, N. J., has grown so that the concern has leased a large building at 14 Westfield avenue, which has a floor space of 8,000 square feet. It will be used for storage and repairing. The company also rents automobiles.

**Garage and Factory**—The Pennsylvania Electrical & Railway Supply Co. has the only large garage in the downtown district of

Pittsburg, Pa., and is putting out a number of machines of its own make. Recently the company built a Rex Buckboard for Louis B. Hays at a cost of \$550, which is proving a decided success.

**Dolsons in New York**—The New York agency for the automobiles being built by John L. Dolson & Sons, of Charlotte, Mich., has been secured by Walker & Dam, who expect the first of them June 10. The Dolson cars have opposed cylinders of 18-horsepower, with either side door or rear entrances, will seat five passengers and sell for \$1,450.

**Decauville Strike**—The Standard Automobile Co., of New York, is experiencing an annoying hitch in its regular receipt of Decauville cars through a strike in the French factory. Hitherto this season the company has been among the luckiest of all the importers in its ability to make prompt deliveries. The present hitch, however, is but temporary.

**Establishing Steam Agencies**—The Central Automobile Exchange of Providence, R. I., which was recently incorporated, has established agencies in New York, Hartford, Bridgeport, Taunton and Fall River, and will begin to sell Stanleys at once. All of these places are new agencies, none of the men acting for the exchange devoting their time to anything else or to any other machines. This action is in line with the policy that was adopted at the time the concern changed hands.

**Back for Repairs**—The Chimut-Bayard car, in which P. E. Moscovics was making a tour from New York to Chicago in the interests of Sidney B. Bormann and Emil Grossman was returned to New York last week for repairs. Lawrence Livingston, returning to Buffalo from a trip to Tonawanda, ran it into a tree and broke the radiator. When repaired it will resume its tour from Buffalo. In the trip to the Electric City over abominably muddy roads its only mishap was a broken spring.

**Jonas Had a Fire**—Theodore Jonas, one of the prominent automobile dealers of Milwaukee, Wis., sustained a severe loss last week in a fire which destroyed fire machines. His loss he estimates at \$17,000, of which about \$14,000 was not covered by insurance. According to officers of the Jonas Automobile Co., no cause for the fire has been discovered. The machines destroyed were for the most part new, only two being second hand. There were four or five touring cars in the building that

was burned, the remainder of the machines being runabouts.

**Big Southern Garage**—Savannah, Ga., claims to possess one of the finest automobile stores and garages in the south. It was completed recently at 18 State street and is occupied by R. V. Connerate. The building is three stories high, 33 feet wide and 90 feet deep. It is of brick, with a white front, which is a good imitation of white marble. The first story has a granolithic floor and is used as salesroom; the second floor is the storage room and the top floor the repair shop and stock department. An elevator 8 by 15 feet is used for hoisting the cars. Mr. Connerate is agent for the Pierces, Franklin, Pope, Autocar and Stevens-Duryea.

**Motor Car Clearing House**—Thomas W. Day, formerly president of the Day Automobile Co., of St. Louis and Kansas City, Mo., has completed arrangements for inaugurating a system of handling second-hand and new automobiles, under the name of National Automobile Exchange, with headquarters at St. Louis. The object will be to provide a medium of exchange, purchase and sale of second-hand automobiles, by listing them with the exchange upon payment of a small fee, which will be deducted from the commission when the sale is made. The exchange will list and advertise all machines placed with it for sale. There will also be a department for the purchase of new machines and supplies for customers at the lowest possible prices.

**Big Foreign Truck Arrives**—The Consolidated Motor Co., of New York, whose truck won the gold medal in the 2,000 to 3,000 pound class in the A. C. A. business wagon test, has received from Nuremberg, Germany, a friction-drive gasoline cab for demonstration purposes. Counterparts of it will be built at the Gloversville, N. Y., factory for private use and to equip a line the company expects to establish in New York. It is planned to complete 100 of the cabs before December next. Negotiations are in progress to equip one of the big express companies with fifty trucks and an order has been taken for six buses for a passenger line in Pittsburg. President Cryder says that the total cost of repairs in the medal winning truck during the year of its running was but \$109.16.

**White's Detroit Garage**—The White company is to have a fine garage in Detroit, Mich. Work has already begun and when completed it will be among the most convenient in the country, both as to location and interior arrangement. The new building is to be located at 72 and 74 Farrar street and will be a three-story brick structure, with paving brick front. The building will have a frontage of 45 feet, with a depth of 100 feet and a floor space, on the three floors and the large basement of 15,000 square feet. The ground floor will be used for display room and storage purposes. The second floor will be the salesroom proper, and a big repair department will be located on the third floor. In the basement will be the washing and cleaning department. The building will, of course, be equipped with spacious elevators for passengers and freight, electric lights, with the Luxfer system of day lighting. The building will be of slow burning construction and will be ready for the White company the first part of June.

# THE READERS' CLEARING HOUSE

## SELECTING A STORAGE BATTERY

El Reno, Okla.—Editor MOTOR AGE—What are the principal differences between the storage batteries regularly on the market and how should a person be guided in selecting a battery for use in an electric carriage?—R. S. Trulock.

The basic storage battery patents having recently expired, there is noticeable a similarity in the cells now on the market, which differ principally in the detail construction. Write for literature to battery advertisers and note particularly the internal construction, considering the vibration and jar to which the battery will be subjected in an automobile. See if the design of the grid is such that it will effectually retain the active material, and if the active material does shake off, determine if it will short circuit the adjoining plates. Also note whether wood, rubber or glass separators are used and their location, and see if the plates are amply supported? Find out which cell has the greatest capacity for its weight, considering also the maximum discharge rate without injury to the cell. Have the manufacturers give the average life of the cell and the annual cost of maintenance. A comparison of these factors from the manufacturers will help to arrive at a decision.

## TWO-CYCLE DESIGN

Columbus, O.—Editor MOTOR AGE—What is the correct area of the inlet piping of a two-cylinder, two-cycle motor of 4-inch bore and stroke to run at 1,000 revolutions per minute, and with the crank case space as small as possible? What should be the air opening area around the nozzle of a float feed carburetor for this engine, and what should be the area of the air inlet of the same carburetor? Should this latter area be maintained up to the point of constriction in area around the nozzle? What should be the size of the gasoline feed hole through the nozzle? Could this engine be controlled by an extra air inlet governed by a spring check valve between the carburetor and the crank case? Would not throttling effected without this extra air inlet reduce the compression pressure in the crank case to too great an extent? How far from the crank case should the carburetor be placed and what would be the effect of exceeding this distance? The carburetor would receive hot air from around the exhaust pipe?—C. C. H.

Use an inlet pipe  $1\frac{1}{4}$  inches in diameter and an exhaust of 1 $\frac{1}{2}$  inches so as not to retard the exit of the burned gases. The air opening in the carburetor, unless supplied for the motor, should be adjustable. By experiment only can the proper relation of these areas be determined. If the carburetor has two air passages, one around the nozzle, and one auxiliary opening, it will be found that the nozzle air area should be about one-third of the inlet pipe. Arrange, if possible, between the carburetor and the motor an auxiliary opening closed by a light spring and having a maximum area of two-thirds that in the inlet pipe. A little experiment on the strength of spring and

the nozzle area will give a satisfactory carburetor. Do not attempt to throttle between the carburetor and the crank case, base explosions will be caused. The throttle should be between the crank case and the cylinder. Place the carburetor as close as possible to the crank case for the further away the less will be the suction and the base compression. Warm air to the carburetor will help to volatilize the oil, but hot air will result in "cracking" the fuel and will cause incomplete combustion.

## NEEDED RADIATING SURFACE

St. Louis, Mo.—Editor MOTOR AGE—What, in average practice, is considered to be the correct number of square feet of radiating surface per motor horsepower?—G. D.

Design the cooler so that the total radiating surface divided by the total cylinder heating surface equals 40 or over, the inch being the unit used.

## MULTIPLE-CYLINDER IGNITION

Numerous inquiries have been received by MOTOR AGE for explanation of systems of ignition of multiple-cylinder motors from a single induction coil. The illustration shows a good plan adapted to three cylinders but it may be used for any number by inserting more or less segments in the commutator and more or less secondary terminals. It consists of a case A-B of insulating material, which is free on the cam shaft and may be shifted to vary the spark lead. On the cam shaft J is keyed a commutator, composed of a metallic member I and an insulating member II. The metallic member has three slots, angularly equidistant, into which fit tongues from the insulating member II. At E is a brush resting on the commutator. Being fixed in A it is insulated except when in contact with the metallic segments of the commutator I. By following the wiring circuit it is seen that the coil will produce three secondary sparks to each revolu-

tion of the cam shaft, each of which must be distributed to a different plug. One of the secondary wires from the coil is connected to the insulating cap C, on the terminal G. The distributing arm F is insulated, being on the rubber portion H, and revolves with the cam shaft. As it rotates it passes successively the three terminals D D D, one of which is connected to each plug. At each primary interruption the secondary passes to G, jumps to F, and from F to the adjacent plug terminal. The arm F should be carefully set so that it is opposite a plug terminal at the same time the primary is interrupted, otherwise the coil will be injured.

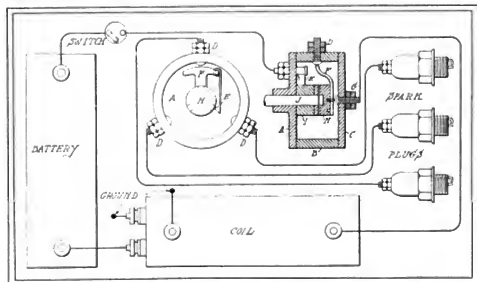
## GEAR VERSUS CHAIN DRIVE

Pittsburg, Pa.—Editor MOTOR AGE—Which is the better for a light tonneau car, chain or gear drive? Also what are the general advantages and disadvantages of each system?—R. E. Tryford.

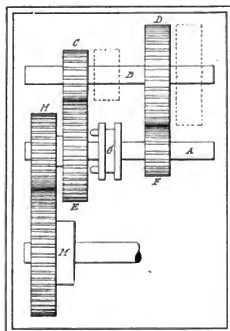
The system of driving through a chain furnishes an extremely simple construction which possesses the advantage of being readily repaired and permits of several gear changes. The chain is exposed to mud which without some form of a protector produces cutting of the sprockets and links. Considering efficiency under favorable conditions there is no choice between bevel gear and chain drives. The bevel gear drive is more expensive but is entirely enclosed from dirt and runs in oil, when properly designed. Usually when a chain is lubricated it becomes a collector of dirt and the efficiency of the drive decreases. For a light tonneau car the chain drive seems to have a decided preference, although the bevel gear system is rapidly becoming more prominent on the better grade of cars.

## AMOUNT OF COOLING WATER

Altoons, Pa.—Editor MOTOR AGE—I was interested in the article in MOTOR AGE recently on motor cooling systems. I do not claim to be a judge of the different forms of coolers but believe that there are 13 or 14 gallons more water than is needed in a 15-gallon system of any kind. Am I correct when I say that the volume of water in the tank does not necessarily increase the cooling efficiency? Is the tank not merely a reservoir? Has it anything to do with the reduction of the water temperature? The water is heated by the engine and cooled by radiation while passing through the radiators. What is the difference,



COMMUTATOR AND WIRING SYSTEM FOR IGNITING MULTIPLE-CYLINDER MOTOR FROM ONE COIL



GEAR SUGGESTED BY E. P. DU PONT

if any, in the horsepower of a 5 by 5-inch single-cylinder engine and one  $4\frac{1}{4}$  by 6 inches, both running at the same speed?—J. U. Blouse, M. D.

The volume of water does not increase the cooling effect except as it serves as a carrier, and being of large size, which of course means more radiating surface. The volume of water depends upon the efficiency of the radiator. A certain number of heat units may be abstracted from a certain volume in the unit of time or these heat units may have to be distributed in twice the quantity of water, to be carried away in the same time. The 5 by 5-inch motor has 1.15 times as much power as the one of 1 $\frac{1}{2}$  by 6-inch bore and stroke.

#### VALVE PROPORTIONS

Cleveland, O.—Editor *MOTOR AGE*—What horsepower would a four-cylinder motor of 3 $\frac{1}{2}$ -inch bore and 4-inch stroke develop at 900 revolutions per minute? How large should the inlet and exhaust valves be? What should be the lift of the valves and at what point of the piston stroke should the exhaust valve open? What should be the diameter and weight of the exhaust valve?—E. H. Sherbondy.

A four-cylinder motor 3 $\frac{1}{2}$  by 4 inches should develop 10 horsepower at 900 revolutions. Make both valves 1 $\frac{1}{2}$  inches in diameter and have them lift  $\frac{1}{2}$  inch. Have the exhaust valve stem  $\frac{1}{2}$  inch in diameter and it will prevent burning and pitting by conducting the heat more rapidly. Open the exhaust valve when the piston is within 11-32 inch of completing the stroke.

#### TWO-SPEED TRANSMISSION

Moulchaum, Del.—Editor *MOTOR AGE*—I have a gasoline automobile with a 4-horsepower motor whose maximum speed is 2,000 revolutions per minute. I wish to fit it with a slow speed transmission gear in the place of the single speed or direct drive with which it is now equipped. There is not much lateral space for the application of this gear. Would the system shown in the accompanying sketch be practicable and efficient, as well as easy to make? The crank shaft is A, while H is the driving gear to which is attached the free gear E. When the gears on the counter shaft B are in position for slow driving, the drive

is through F, D, B, C and H to the rear axle. When the counter shaft gears C and D are out of mesh, respectively, with E and F, the disk G, slidably but non-rotatively mounted on A, is moved toward the gear E so that the pins on its side engage with corresponding recesses in E and thus establish a direct, high-speed drive. There is a suitable clutch at M. The gears E and D would each have forty No. 8 pitch teeth, while the gears C and F would have twenty teeth, thus reducing the speed to one-fourth on the low gear drive. If this is not a good plan will you kindly show a better one which will not occupy any more lateral space?—E. P. du Pont.

The transmission shown will work very well, but the clutch, if placed between the motor and the transmission, instead of at M would render the car less noisy when the motor is running idle. The sketch shows two movements necessary to get from the low to the high gear, first throwing out the counter shaft, and second, throwing in the positive clutch G. If there is no objection to having the counter shaft running idle on the high gear, the gear F may run idle on the shaft A and have corresponding clutch faces to engage with the shifting collar G. This would simplify the general arrangement, particularly the operating levers, and would take very little more room. The construction would then be quite practicable.

#### VALVE LIFT

Michigan City, Ind.—Editor *MOTOR AGE*—I have under construction a four-cylinder gasoline motor of 3 $\frac{1}{2}$ -inch bore and 4-inch stroke. The inlet and exhaust valves are of the same diameter, with a 1 $\frac{1}{2}$ -inch opening in the valve seat. The seats are beveled to 45 degrees. All valves are mechanically operated by cams. The motor is to run at a maximum piston speed of 750 feet per minute. What is the least possible lift of the exhaust valves for this motor, and what should be the lift of the inlet valves to give the best results at the speed mentioned?—R. E. Crockett.

The valves are of good area and a lift of 5-16 inch will be sufficient, and if the motor speed is to be not higher than 750 feet per minute 9-32 inch lift will do. Give the inlet and exhaust valves the same lift so as to use interchangeable valves and cams and depend upon the throttle for speed variations.

#### FINISHING VALVE CHAMBERS

Columbus, O.—Editor *MOTOR AGE*—I would like to know the most accurate and most convenient method of boring and facing valve seats and of getting the valve stem holes in line with the seats; also of boring, facing and chasing, or cutting threads if the valve stem guide is screwed in. Referring to the accompanying drawing a center line through A ought to pass centrally through B; also the center of C ought to coincide with that of D. In some cases, B is only 5-16 inch in diameter, which is a very small hole to bore, while if one depends upon a drill it will run out of line and throw the hole to one side. The larger hole E can be bored out accurately relative to C, as it is usually  $\frac{3}{4}$ -inch in diameter, or more, and can be bored at the same operation with C. In many cases the facing cutter with its pilot I in B, and a collar G which slips over the shank H to fit into the hole F, may be used with fairly good results in the finishing operation of facing A. Information upon this subject would be appreciated.—C. E. F.

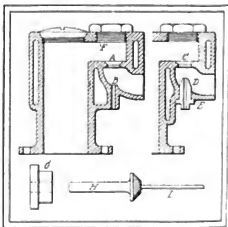
The method shown should give a pretty accurate job. On the cylinder with the plain valve stem guide, design this guide B as long as possible, so as to steady the cutter. Bore the holes F and A and make a plug for each, with a hole for the drill size at B. With the plugs in place drill the hole B, the plugs acting as guides. Afterwards ream B. Then insert the plug G and with the cutter on I make the valve seat. When a separate guide is used do not screw it in but make it a drive fit. As previously described bore the hole for D and F and rough bore the valve seat C. The guide D is turned on an arbor, the hole having been reamed. After it has been driven in place the cutter I is used having a guide for the pilot in D and one for the shank in plug G. Do not cut the threads for the screw plug G until these operations are completed. This will line the valve but of course grinding will be necessary as well.

#### DOGS AS NUISANCES

Hamilton, Ont.—Editor *MOTOR AGE*—A short time ago my chauffeur, while driving my car on a main street of the city, killed a dog. The owner is now about to enter suit for a large amount for the loss of the dog, which was considered valuable as a pet and on account of its pedigree. The owner of the dog claims that the car was being driven at a "furious rate" and that the driver did not stop to see what damage he had done. My man was going up hill at the time and says that he had one of his carburetors turned off, as the engine had not been working properly, it being the first trip out after having been dismantled for winter repairs. He also says that the dog jumped out from the side of the road, stopping in front of the car, which seems reasonable. The wheels did not run over him, but he passed right under the body of the car, being killed by the sprocket.

As you are so doubt aware, dogs are a continual source of danger and annoyance to automobilists. If to this is to be added the danger of heavy liabilities for every accident to these animals, automobilism will become too costly for the ordinary mortal to indulge in.

For the above reasons I intend to fight the suit on the ground that dogs when at large are at their owners' risk. There are very few cases on this point as regards automobiles, and I fear that the court may think it sufficient proof of negligence on the part of the defendant should the plaintiff establish the fact that the car was being run at a "furious rate," which would not be difficult, on account of the universal dislike in which the automobile is held by the lover of horses.



VALVE CHAMBER FINISHING

By the laws of the United States or England, is it sufficient proof of the fracture of a speed limit law to say that a car was being driven at a "furious rate" or must the actual rate be established by the plaintiff?—STEWART E. MALLOCH.

To prove that a man has broken a speed law the actual speed at which he was driving must be given. Of course, this means simply that the plaintiff must convince the judge that a certain rate of speed was attained. The ease and amount of proof with which this may be done depends upon the judge.

### MOTOR CHATTERING

New Paris, Ind.—Editor MOTOR AGE—What can be done to stop the inlet valve of a motor from chattering? My motor is of the single-cylinder pattern and of 5¼-inch bore by 6-inch stroke. The inlet valve is suction, or, more correctly, atmospherically operated, and is 1½ inches in diameter. The valve chatters a great deal at times, especially when the motor is running light or without load. Why are automobile motors almost invariably made without means for taking up wear in the crank shaft bearings? The wear of a few weeks will cause the shaft of my motor to pound and to run out of line. Would a split adjustable bearing be advisable on the crank shaft of this motor? It runs at 900 revolutions per minute. Why are bronze bushings generally used in preference to babbit metal? Would not babbitted bearings be less liable to cause damage to the shaft? How should I proceed to correct a wrist pin bearing which has become heated so that furrows have been cut in the shaft and connecting rod? Would air pressure from the crank case be suitable for forcing oil from the lubricator in cold weather? If such pressure were used should there be a check valve between the crank case and the lubricator?—ELMER WHITEHEAD.

Chattering of the inlet valve may be caused either by the spring being too stiff for the speed at which the motor is running, or by the valve being too large. Try a lighter spring tension. It is a fact that many motors have no take up in the crank shaft bushing, which is decidedly poor practice. If possible arrange to use a split bushing. For many reasons a babbit bearing is to be preferred to a solid bronze bushing, but, of course, it has no adjustment. Remove the crank shaft and turn it a little until the furrows disappear; then make a new bushing bored to fit. A temporary repair can be made by filing the shaft and finishing with emery cloth, and smoothing the bushing with a scraper.

### REDUCING VIBRATION

Greensburg, Ind.—Editor MOTOR AGE—My automobile has a 10-horsepower double-cylinder, vertical motor, with both pistons connected to the same counter-balanced crank pin, and with an impulse each revolution. The fly wheel is 18 inches in diameter. The engine develops its full rated power but there is too much vibration. Would it lessen the vibration to substitute two smaller fly wheels, one on each end of the motor crank shaft? If so, what should be the diameter and weight of each? The engine seems to be perfectly balanced when turning it over with the starting crank. What is the best method of wiring this engine, which has a single-noise cam on the cam shaft and a double contact commutator with two binding posts?—I. J. Hollenabe.

A fly wheel on each end will not affect the

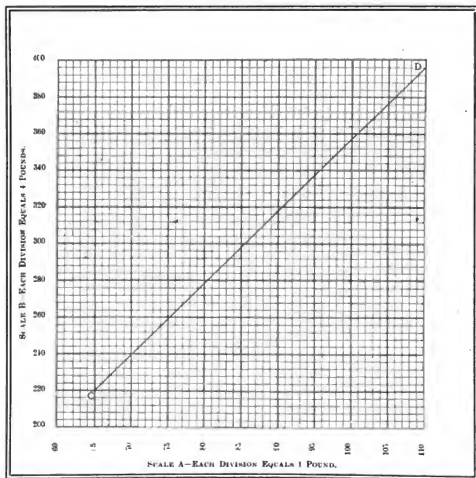


DIAGRAM OF MOTOR PRESSURE

vibration. A little experimenting by adding more or less counter balance may help. This could be done by drilling holes in the fly wheel in line with the crank throw and bolting blocks of various weights until a weight is found that gives the least vibration. The head of the piston should not be over 5-16 inch thick and the piston wall below the pin should not exceed ¼ inch. Extra weight in the reciprocating parts will produce excessive vibration. MOTOR AGE illustrated a wiring system in its issue of May 12 for using two coils, and one in the issue of May 5 for using one coil, on a two-cylinder car.

### MOTOR DESIGN

Columbus, O.—Editor MOTOR AGE—I am designing a four-cylinder opposed motor of 3½-inch bore and stroke, and wish assistance on a few points. What power will it develop at 1,000 revolutions per minute? What should be the size and weight of the fly wheel? Would two cranks set at 90 degrees so that pins of each pair would be at 180 degrees, be the best method of attaching the connecting rods? What style of clutch will furnish the easiest starting? Does a metal-to-metal clutch running in oil give good results?—C. K. P.

Four cylinders 3½ by 3½ inches should develop nearly 9 horsepower at 1,000 revolutions per minute. A fly wheel 17 inches in diameter having a rim weight of 55 pounds will be ample. The best way to arrange the cranks would be to have the cranks for each opposed unit 180 degrees apart and have the line of throws of the respective pairs at right angle to each other. Probably the easiest starting clutch is of the coil spring variety such as is used on the Mercedes car. A clutch composed of several separate radially expanding arms will start very easily. A metal-to-metal clutch

running in oil with one surface of bronze and the other of steel will be found very smooth in action and quite durable.

### EXPLOSIVE PRESSURE

In response to several recent inquiries the accompanying diagram is given to determine the appropriate explosive pressure in a motor when the gauge pressure is known. In it all pressures are absolute, 15 pounds, or atmospheric pressure being added to the gauge pressure. Scale A represents the absolute pressure of compression, and scale B the absolute pressure of ignition. Suppose the gauge pressure of compression is 73 pounds per square inch and it is desired to find the ignition pressure. The absolute pressure will be 75 pounds plus 15 pounds, or 90 pounds. On scale A, at the 90-pound line, follow vertically to the line CD. At the intersection of this line with CD, project to the left on scale B. The projection strikes the vertical scale between 316 pounds and 320 pounds and is about 318 pounds. This being an absolute pressure, subtract 15 pounds, which gives 303 pounds as the approximate gauge pressure of ignition in this case.

### RACER DIMENSIONS

La Rue, O.—Editor MOTOR AGE—How many cylinders has the 90-horsepower Mercedes with which Vanderbilt made his record mile in 30 seconds and of what bore and stroke are they? Of what bore and stroke are the cylinders of the eight-cylinder Winton Bullet?—N. H. Davis.

MOTOR AGE understands that the Vanderbilt Mercedes cylinders are about 6.64 by 7½ inches. Winton's eight-cylinder car contains motors similar to the Winton tearing car motor, which has a bore of 5¼ inches and a stroke of 6 inches.

**Not So Many**—On January 1 of this year 15,432 motor cars were registered in Great Britain.

**New Pennsylvania Concern**—The Twyford Motor Car Co. was recently organized in Brookville, Pa. R. E. Twyford, of Pittsburgh, Pa., is general manager.

**No Automobile Races**—The New York State Fair Commission at its meeting at Syracuse, N. Y., last week decided there should be no automobile races at the fair this year.

**Supreme Judge a Motorist**—Judge Hooker, of the Michigan supreme bench, is probably the first supreme jurist to become a motorist, having recently bought a Thomas Flyer.

**Two Busted**—Applications were recently made in the court of chancery, at Trenton, N. J., for the dissolution of the charters of the Hercules Motor Co. and of the New York Automobile Co. Both companies have been declared insolvent.

**Road Maps**—C. S. Mendenhall, 512 Race street, Cincinnati, O., is issuing road maps of central and eastern states, especially prepared for automobilists. Each state book contains a large map of the state and several detail maps of different sections.

**Kilometer Record Broken**—According to a cablegram report Baron de Caters, the Belgian automobilist, broke the world's kilometer record last week at Ostend, covering the distance in 23 seconds flat, which gives an average speed of 97 miles per hour.

**Speed Did It**—While George H. Baltz, of Watertown, N. Y., was riding one night last week in his automobile the gasoline tank in some way caught fire, starting a blaze that threatened the machine and its occupants. It was quickly extinguished before much damage was done.

**Factory at McKeesport**—Randolph E. Sweeney, of Philadelphia, Pa., and other eastern capitalists have purchased a site in McKeesport and will build a plant for the manufacture of automobiles and electric carriages. The plant will employ 200 men and will be started at once.

**Assessors After Motorists**—The city assessors of Trenton, N. J., have secured the names of 110 owners of automobiles in the city. The value of each machine will be furnished by the state licensing office and from the information the assessors will fix the tax to be paid by the owner.

**Century Stock Sold**—Before leaving Syracuse, N. Y., on a 10 days' trip to Quebec last week Frederick B. Scott, of the Syracuse Supply Co., announced that nearly all of the \$50,000 worth of machinery and stock purchased from the trustee in bankruptcy of the Century Motor Vehicle Co. had been resold, so that there is little remaining at the factory.

**An Effective Penalty**—The German Automobile Club has issued a special notice to its members to the effect that on account of the numerous complaints of fast riding which it has received from the local authorities of many localities along the Taunus route, it has decided to ask the government to prevent the use of the road to any motorists unless the driving of cars beyond the speed permitted by law ceases at once.



JOSEPH CANTHORE, OF "MOTHER GOOSE" COMPANY, AND HIS WIFE.

**A Dealer's Predicament**—Carl G. Fisher, a dealer in Indianapolis, Ind., was arrested a few days ago because the initials which the state law requires to be on every motor car were not on the machine which he had at the time. When taken to the police station the dealer protested against the arrest, claiming that the machine was new and about to be delivered to its purchaser. He further stated that he had received six new automobiles that morning and that he had to run them through the streets in order to get them to his store, and that he could not very well have secured the required license and initials. The police officer refused to dismiss the case, which will be argued before the police court judge. Fisher said that he would take the case into the higher courts if necessary, believing he was not at fault.

**Must Make Good**—A Belgian justice recently decided that if a dealer in selling a car to a customer promised in writing, that the machine is in perfect order and could be run at a certain average speed per hour, the customer has the privilege of returning the car even after having had it 24 hours should it not come up to the promise. All the costs in connection with the case had to be paid by the dealer, and they included fees to experts who tested the machinery that was the cause of the suit.

**Freight Reduced**—By a recent ruling the old 5,000-pound minimum weight at which automobiles will be accepted as freight has been reduced to 2,000 pounds in the case of small cars. Such cars must be shipped crated or boxed, with wheels and seats detached and must form a package not exceeding 110 inches in length by 30 inches in height. This ruling has nothing to do with the N. A. A. M. campaign for lower freight rates, which aims at a general reduction.

**Edison Relentless**—It is expected that the report of Acting Commissioner of Patents Moore on the charges made by Thomas A. Edison against the patent office examiners, an account of which appeared in the last issue of MORON AGE, will be sent to President Roosevelt within the next few days. It may also go to the attorney general. It will be remembered that President Roosevelt directed the investigation.

**Gives Up Horses**—The Dubuque Maiting & Breeding Co., Dubuque, Ia., which uses a great many horses and wagons, is reported to have decided to replace this service with automobiles. One was put into service a few days ago and the time gained in deliveries and the increased load which the car carries was a surprise to the officers of the company.

**Delivery Soon**—Smith & Mahiey, of New York, will begin delivery of Simplex motor boats within 3 weeks.

**Mechanical Pastor**—Reverend C. H. Hobart, pastor of the First Baptist Church, of Los Angeles, Cal., has completed a small runabout of his own design. It is claimed that the car is well made and fast finished.

**Seeing Milwaukee**—The management of the Schlitz hotel, Milwaukee, Wis., has made arrangements with the C. G. Norton Automobile Co. to operate a hotel brake seating twelve passengers. It will be run for sight-seeing parties.

**Another Four Flush**—It is reported that Henry Muhle, of Wheeling, W. Va., is finishing a racing machine which is supposed to travel at a rate of only 400 miles an hour. He expects to win the Gordon Bennett race next year.

**New Factories Growing**—The new factory of the R. E. Dietz Co. at Syracuse, N. Y., is being rapidly pushed to completion. The New Process Rawhide Co.'s new factory on the salt lands in the same place is also beginning to assume form.

**Slower than Miles**—The "wise" authorities of Dubuque, Iowa, are endeavoring to get an ordinance through the city council limiting the speed of automobiles to 6 miles an hour. Someone has also suggested that it would be a good thing to nominate a "walking delegate" to superintend the enforcement of the law.

**Championship Won by The**—Marius The, of France, on an 18-horsepower Clement motor cycle, won the world's professional championship in Paris May 8. The event was run in heats and semi-finals, the final being over a distance of 10 kilometers—6½ miles—which The covered in 6:27 2.5. Maurice Fournier won the championship last year on the same machine.

**Put Up Speed Signs**—In order to prevent motorists from claiming that they are not familiar with the city speed limit ordinance the authorities of Tonawanda, N. Y., have ordered a number of large signs to be placed at the principal street crossings and in prominent places along important thoroughfares. The signs will simply bear the words "10 miles an hour."

**White Enamel Numbers**—Alderman Sherburn M. Becker, a prominent automobile enthusiast of Milwaukee, Wis., will introduce an ordinance at the next meeting of the common council amending the present automobile law. Provision will be made that all machines carry numbers in white enamel and that all owners, with the number of their machines, be registered with the chief of police. The regulation desired is similar to that in other cities.

**Thieves in Detroit**—Automobile thieves were busy in Detroit, Mich., last week, according to newspaper reports. Six cars were stolen in 6 days and the manner in which the thefts were made seems to indicate that they were the work of a well organized band. In two instances it appears that the cars were standing in front of the owners' residences between 8 and 10 o'clock in the evening. The thieves simply got into the machines and drove them off.

**Owner Not to Blame**—The supreme court of Belgium rendered a decision recently which has brought forth the protests of a great many automobile owners. The higher court reversed a decision of a lower court, which had decided that the owner of an automobile is not necessarily responsible if an accident is caused by his car if driven by somebody else. The supreme court decided that when the law was made requiring automobile owners to number their machines it was done especially with a view of punishing the owner of the numbered car when he was found at fault. The only way he could possibly escape punishment was to give the name of the author of the accident, and even then he might well be held.

**Better Than a Trolley**—A suburban automobile service will probably be inaugurated during July in Philadelphia, Pa. The Philadelphia and Merion Transportation Company will handle the service, which will start at Fifty-second street and Parkside avenue, and run to West Philadelphia and possibly to Merionville and Narberth. Two cars are to be used at first, each seating about twenty persons, and the fare will be 5 cents one way. Each trip will take from 20 to 30 minutes.

**Good Excuse, but Fined**—Charged with operating his automobile at a rate of 28 miles an hour, A. I. Cline, the Rambler agent at Washington, D. C., was fined \$10. In his own defense Mr. Cline said that the machine he was operating was for sale, and that dealers were compelled to gear the machines high to make a showing of great speed in order to satisfy possible purchasers. This plea, however, failed to move the court, and the fine was assessed.

**Brennan Enlargement**—The new plant of the Brennan Mfg. Co., of Syracuse, N. Y., is now in full operation. A short time ago the company leased for 10 years the factory building formerly occupied by the Piqueux Machine Shop & Foundry, a three-story building with 18,000 square feet of floor space, and has since equipped it with modern machinery for making gasoline motors.

**Forty-two in a String**—Forty-two motor cycle riders from New Haven, Stamford, Bridgeport, Brooklyn and other localities, and all riding Indian machines, were the guests of George H. Hendee, at Springfield, Mass., a few days ago. The excursionists attracted much attention and created amazement among the country people along the route to the Hendee factory.

**Same Conditions Exist**—The Diamond Rubber Co. announces that as the American Motor Association is the successor of the American Motor League, the conditions governing its diamond challenge cup will apply as if the latter existed. The cup must be won three times by one manufacturer or his representative to become his permanent property.

**Here's a Race**—Judge Hayward, of Nebraska City, Neb., has issued a challenge to any motorist in Omaha for a race between himself in his steam launch and an automobilist in his motor car, from Omaha, Neb., to St. Louis, Mo. The race is to start about July 1 if anyone accepts the challenge.

**Evansville Progresses**—Evansville motorists have been happy since 11 o'clock Tuesday night. The city council of the Illinois town met that evening and passed an ordinance raising the speed limit for automobiles to 12 miles an hour, an increase of 4 miles.

**Good for Quincy**—Twenty-one owners of automobiles have registered their cars with the city clerk of Quincy, Ill.

**Same Old Claim**—Allentown, Pa., has ninety-four automobiles and in proportion to its population is the first automobile town in the state of Pennsylvania.

**Few Out of Business**—Sixteen second-hand automobiles were destroyed by fire last week in Milwaukee. They belonged to the Jonas Automobile Co., and were insured.

**Still Another**—It is reported that Fred Titus, the former bicycle rider, will join the Pope Manufacturing Co. at Hartford and drive one of the racing cars of the company.

**It Depends**—A country paper claims that people in large cities living near a garage state they prefer to live near a stable, as the odor from the latter is not so objectionable.

**Big Garage Burned**—A cablegram from Nice, France, reports the destruction through fire of the automobile club's garage. About sixty cars valued at \$200,000 were burned.

**Factory at Harvey, Ill.**—It is reported that a new factory will soon be in operation in Harvey, Ill., which will manufacture an automobile especially adapted for rural mail carriers.

**Pretty Good Pay**—Jaquelin, the bicycle rider, is reported to have received an offer from an automobile manufacturer guaranteeing him \$100 a week for a year's contract as a driver.

**Register or Suffer**—Only 201 automobiles of the 300 or more that are owned in Indianapolis, Ind., have been registered. The police department is to make trouble for those found in fault.

**Study French Timing**—Three members of the German Automobile Club were sent to France to study the French system of time-keeping during the Ardennes eliminating race. This system will also be used in the German race.

**Money Going West**—According to a local report Boston capitalists are organizing an automobile touring company in Colorado Springs, Colo. About \$200,000 is to be invested for the building of a large garage, an electric light and power plant and the purchase of cars.

**Indianapolis Speed Limits**—In that section of Indianapolis, Ind., bounded by North, East, West and South streets motor cars may not be driven at more than 8 miles an hour. In other parts of the city 12 miles an hour is allowed. All cars must be registered and the owner's initials must appear in a conspicuous place on the car. A bell or horn and lamps must be provided on every motor car and drivers must slow at turns and crossings. Violation of the law is punishable with a fine of from \$5 to \$50, and in case of a pedestrian being run over on account of excessive speed the driver may be fined from \$1 to \$1,000 and sent to jail for 6 months. In case of manslaughter the penalty is from 2 to 21 years.

**Fine or Imprisonment**—An automobile ordinance was presented to members of the city council of New Castle, Pa., last week. It provides that the speed of automobiles when going through the streets of the town must not be above 6 miles an hour and that all cars must be provided with a bell, lamp or horn. The violators of the ordinance will be punishable by a fine of from \$5 to \$25 and imprisonment in the county jail not to exceed 20 days.

**Up Against It**—The chief of police of York City, Pa., says he can do nothing against reckless drivers because there is no city ordinance governing the speed limit of cars. There is a state law, but it cannot be applied by the police officer. The rate of speed allowed is 8 miles an hour all around, but at crossings cars must not be driven at a greater speed than 6 minutes for one mile.

**Took Off Big Chunk**—A. H. Piepenburg, of Santa Barbara, Cal., recently drove in his White touring car from San Diego to San Francisco in 5½ days, breaking the former record by 2½ days. The distance between the two towns, according to railway maps, is about 615 miles, but Mr. Piepenburg actually covered 740 miles, according to his odometer.

**Some Need It**—The Battersea Polytechnic Institution of London, England, has decided to start a summer class for chauffeurs. Twenty-eight pupils will be received for the course, which will last 6 weeks, and include workshop instruction and lectures. The instruction course will cost about \$10 and if driving lessons are wanted there will be a similar extra charge.

**Tufting Machines**—Upholstering for automobiles is the chief subject in the catalogue of upholstering appliances made by the Novcity Tufting Machine Co., 263 Dearborn street, Chicago. This company's tufting machines are used by about thirty of the leading automobile manufacturers.

**Prince on a Rubbering Tour**—Saturday last Prince Pu Lun, in company with Wong Kai Kah, commissioner to the world's fair from Chion, headed by Mayor Holtzman, visited the factory of the G. & J. Tire Co. at Indianapolis, Ind. The prince is making a study of American factories.

**Not Difficult**—A parade is being arranged in Minneapolis, Minn., for next Saturday. It is expected that it will be a big "400" turnout. At any rate, the Minneapolis motorists expect to do better than Chicago last Saturday.

**Monument to Renault**—A monument in memory of Marcel Renault will be unveiled May 26 in Boulogne, France, his native town. French motorists contemplate turning out in great numbers on the occasion.



ITALIAN POST-OFFICE AUTOMOBILE



# CURRENT MOTORING MISCELLANY

## FARMAN TO RETIRE

Henry Farman may retire from automobile racing. Before the French eliminating race on the Ardennes circuit he expressed himself to Parisian friends as intending to do so after that race in case he should not be successful in trying to secure a position on the cup race team.

Farman began racing in 1901 for the Darraq company. During that year he won three road races over distances varying from 93 to 250 miles, driving a two-cylinder racing car in each of these events. He became associated with the Panhard-Levassor company in February of that year, and finished sixth in the Paris-Bordeaux race, being set back account of tire punctures and after having been in the lead. The same year he arrived fifth in Berlin in the Paris-Berlin road race. In 1902 he was second in the 1,000-kilometer alcohol "critérium," and arrived first in Vienna in the Paris-Vienna race. Last year he took part in the Paris-Madrid race and had an accident soon after the start. He finished third in the cup race in Ireland.

## SOME PECULIAR WRECKES

Providence, R. I., May 21.—Now that there are in this city many who have received new automobiles and whose knowledge of the powers, capabilities and eccentricities of machines is something less than that possessed by Oldfield, Schmidt and other speed sharks, there are already some machines back in the garages with badly damaged fronts and with considerable paint gone from all over the finely polished tonneau bodies. During the last 2 weeks there have been no fewer than three accidents in this city, and while there have been no fatalities some of the escapes have been closer than those who went through them care to repeat.

In Wrentham, Mass., last week a big touring car ran into a tree, which withstood the shock, but the automobile was a wreck. The engine was pushed back under the front seats and the radiator looked like a spring bed after a fire. Nobody was hurt, but all of the occupants of the big car got out of the machine in a mixed condition.

A recent purchaser of a \$2,000 machine ran it into a telegraph pole while seeing what sort of speed he could get out of his big plaything, and he hit the pole such a blow that it had to be reset. The canopy top of his machine went by the board, smashing the glass front and twisting the stanchions.

## THE ORMOND-DAYTONA COURSE

Much has been said and written about the Ormond-Daytona automobile racing course. Indeed, so profusely and abundantly has it been described, and pictured, and made the subject of public attention far and wide in other ways, that it has become better and more widely known in the two seasons of racing upon it than many tracks that have been in use for years. The principal reasons for its rapid growth in popular favor are that it is a straight course, and that that track, consisting mainly of fine sand, which is always wet on

account of the overflowing tide and solidly compacted, is unsurpassed as a speedway.

But little has been said of the material itself of the racing course, and of the physiographic conditions to which the formation of this choice piece of coast is due, and which favor its preservation. The section used for the track is 20 miles long, from 150 to 400 feet wide, and is largely compact sand of quite uniform consistency several feet deep. Samples of the material obtained about 4 hours after high tide were carefully examined in the Rollins college chemical laboratory, and the following results were obtained:

Moture	.....	19.00%
Chlorides	.....	1.05%
Calcium carbonate	.....	.70%
Organic matter, etc.	.....	1.05%
Silica	.....	79.10%

The chlorides are due to adhering sea water from the tide overflowing the bed, and the calcium carbonate to ground shells. The shells are ground so finely, however, that the presence of this substance would scarcely be noticed or suspected, except in certain places without making a chemical examination of the bed material.

The sand is unusually fine grained. Comparing a sample of this with one from a central Florida orange grove the following results were obtained:

Amount—	Mesh.	Racing Course.	Orange Grove.
Too large to go through	20	0.6%	0.4%
Too large to go through	30	0.6%	3.9%
Too large to go through	40	8.2%	8.5%
Too large to go through	60	0.4%	26.0%
Too large to go through	80	3.5%	45.1%
Too large to go through	100	51.0%	70.8%
That would go through	100	49.0%	29.2%

It will be seen that about 50 per cent of the track sand will pass through a hundred mesh, or is made up of grains less than .006 of an inch in diameter, whereas only 29 per cent of the orange grove sand will pass through this mesh. There is very little coarse sand among it, all passing 20 to 30, and only small percentages retained by the 20, 60 and 80 meshes, whereas the orange grove sand is made up of several grades, and considerable percentages of each.

The question very naturally arises why the sand is so fine and so free from shell fragments. The answer is that it must be due largely to the wearing action of the tide itself, and the undertow, and especially to frequent shore currents that sweep with great force up and down the coast. Shells which are abundant on the shore sometimes, but are soon carried off, are subject to a violent wearing action, the small ones being ground to powder and the large ones rubbed and rolled along, suffering great loss from the severe attrition. And the sand itself is subject to a similar and constant wearing action.

The shore currents are the resultants of wind-waves striking the tidal wave at an angle at the place where the latter changes from the wave proper to the breaker. Shore currents are a common feature of coast action, and often do much disintegrating and grinding work, rock-masses of considerable size, shells, etc., being tumbled along the shore by them with great force. The conformation of the Ormond-Daytona coast greatly favors the formation of these currents, and the long straight uniform sea-bed here greatly facilitates their geological work.

## NEW CATALOGUES

Charles E. Miller, 97 Reade street, New York, has issued a 160-page catalogue of all of the automobile parts and appurtenances sold by his concern. It is one of the most complete booklets of the kind.

Canopy tops, door-does seats, hampers and similar motor car fittings are shown in a new booklet issued by the Wheeler Mfg. Co., of Detroit, Mich.

Imported lamps and headlights form a large part of the catalogue of Emil Grossman, 298 Broadway, New York.

The catalogue of Lozier motor boats, issued by the Lozier Motor Co., of New York, is typographically and in illustrations one of the most excellent catalogues seen this season. The wash drawings of mechanical subjects are especially good.

## RECENT INCORPORATIONS

New York—American Garage and Maintenance Co., capital \$100,000; to manufacture motor vehicles. Incorporators and directors for the first year, J. T. Rainer, P. N. Lamberger and H. V. Kibbe.

Detroit, Mich.—Sommer Motor Co., capital \$40,000, of which \$5,000 is in cash and \$15,000 in property formerly owned by the Hammer-Sommer Auto Carriage Co. Stockholders, Herman A. Sommer, William J. Sommer, Arthur Schreiter and Alexander J. Reno.

Portland, Me.—F. O. Bailey Carriage Co., capital \$150,000, of which \$25,000 has been paid in. F. O. Bailey, president; C. W. Allen, treasurer. Directors: the president, treasurer and W. A. Gilman, H. G. Milliken, E. W. Cobb and George A. Wagg.

St. Paul, Minn.—Armco Motor Co., capital \$10,000; to manufacture and deal in motor bicycles and accessories. Incorporators, Edwin J. Killa, Archibald J. McCollum and Herbert B. Wheeler.

Baltimore, Md.—The Mar-Del Mobile Co., capital stock \$1,000; to deal in automobiles. Incorporators, Robert J. W. Hamill, John H. Suter, Graham B. Hall, Frederick W. Maldeis and Alexander Hamill.

Pierre, S. D.—Automobile Engineering and Power Co., capital \$100,000; in Illinois, \$2,500.

Detroit, Mich.—The Detroit Automobile Livery Co., capital stock \$10,000, paid in full in cash. Stockholders, Patrick O'Brien, William Nagel, William H. Mahs, Fred Mohr and E. R. Schreiter, Jr.

Canton, O.—Canton Automobile Supply Co., capital stock \$5,000.

Washington, D. C.—Seeing Washington and Mount Vernon Automobile Co., capital \$30,000. Directors, Frank C. Berens, S. Burkhart Emmert and Emile P. Nassbaum.

## GETS PRIZES IN LONDON

Liberty & Co., of London, carried off first and second prizes with two vans built by the White Sewing Machine Co. in the parade of commercial vehicles promoted at the British capital April 30 by the Automobile Club of Great Britain and Ireland to demonstrate the extent of the use of automobiles for business purposes.



# MOTOR AGE

VOL. V. NO. 22

JUNE 2, 1904

\$2.00 Per Year

## BOSTON'S 400 ON PARADE

**B**OSTON, May 28—The automobile carnival, scheduled to extend over a period of 3 days, was most successfully inaugurated by the holding of a parade yesterday afternoon, which in point of interest as well as in point of number of machines participating outranks all parades yet held in this country. To be sure the New York parade was not blessed with the pleasant weather which was granted to the Bostonians, and that unquestionably accounted for the comparatively small number of machines. Chicago, however, had the best of weather and yet she turned out only 228 machines. Boston had exactly 400 machines in line, by actual count, eclipsing all previous figures. Naturally enough the members of the Massachusetts Automobile Club, under whose auspices the parade was held, are jubilant,

most every known make from the little buckboard to the heavy, high powered pleasure vehicles and the great 5-ton truck. All these were there in full glory, and the spectators on the sidewalk, who numbered thousands and extended all over the line of march, had much to hold their attention.

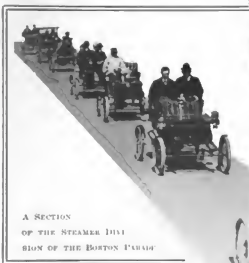
There was not a single thing objectionable in the parade, no advertising of any character being permitted. There was a great diversity of

indeed times when this knowledge was absolutely demanded.

Chief Marshal Eliot C. Lee, president of the Massachusetts Automobile Club, entertained the marshals of the several divisions at luncheon before the parade, and then at the appointed time all took their positions according to order. Chief of Staff William Wallace, who is also chairman of the parade and race committee, and who has worked hard to make both



ON CHESTNUT HILL



A SECTION  
OF THE STEAMER DIVI  
SION OF THE BOSTON PARADE

The line of motor vehicles started at the Chestnut hill reservoir and extended right down Beacon street to Arlington street, the foot of the gilded dome 4 miles away. The spectacle presented to the observers at the tops of the several grades along Beacon street was interesting and inspiring, to say the least. This line of motor vehicles extending in either direction as far as the eye would reach, bespoke far plainer than words the continual progress being made in automobilism.

The parade was in every sense a great object lesson amplifying the fact that a motor vehicle is not the dreadful modern juggernaut, as yesterday these machines were piloted most skillfully under difficult conditions. The aggregation of cars contained specimens of al-



entrances, operators and methods of driving, however. The number of women drivers was large, and while some of them displayed entire familiarity with the levers, others showed a timidity which bespoke rather recent acquaintance with the machines under control, and when going over some of the cross walk bumps displayed their inward feelings plainly on their faces. But the majority displayed as great a knowledge and familiarity with the cars as did the members of the sterner sex, and there were

in success, together with Fred Tudor, Jr., and W. E. Eldridge, the two aids, found no end of work getting the cars into line, but all was done in due season, and promptly at 2:30 o'clock the line of march was taken up.

The police were at the head of the parade in two steam runabouts, Captain Hall accompanying the parade, while two mounted officers were far in advance. President Lee had with him in his White steamer Chief Corey, of the Brookline police, and in the guests' cars were Colonel Albert A. Pope, the selectmen of Brookline, Chief of Police Tarbox, of Newton, Assistant City Clerk Priest and Assistant Clerk of Committees J. W. Doyle, of Boston.

Directly behind the chief marshal and invited guests came F. E. Stanley, of Newton, accompanied by Mrs. Stanley. Mr. Stanley had charge of the steam runabouts, and his division proved in numbers the third strongest in the parade, there being exactly eighty-one cars in it. In this division, as in all others, a large number of the small blue pennants of the Newton Automobile Club were carried, these being the only club colors shown in the parade.

The steam touring class came next, under the pilotage of George R. Alley, another hard working member of the race committee, and the display of these vehicles did justice to his work, there being sixty machines in line, practically all being Whites, with a few Grays scattered here and there. The light weight gasoline class proved the strongest division in the entire parade. W. H. Gardiner, Jr., in a Franklin, led the way. The Franklin divided honors with the Rambler, Cadillac, Oldsmobile, Crest, Ford, Northern, Stevens-Duryea, Pierce and similar cars. There were exactly ninety cars in this division.

L. R. Spears, noted for having ridden throughout the winter, led the heavy gasoline cars, piloting his Winton. Harlan W. Whipple had merged his division with that of Mr. Spears, so that the American and foreign machines were shown alongside each other. This class was another strong one, eighty-nine cars being in line, all being well handled by their operators and showing to considerable advantage. There was a liberal number of Peerless touring cars, and the Knox contingent was a fine representation. The Winton brigade was also a representative one. The Pope-Toledo squad included the new racer, the only track car in the class. The Packard, Fiat, Mer-

cedes, Renault, Locomobile, Arrow, Country Club, Thomas Flyer, Deauville, Clement-Bayard and de Dion-Bouton were prominent in the line.

Then came the trade division headed by Harry Foudiek with the same Winton with which he thrice broke the New York-Boston and round trip record. There were about ten Wintons in this class, which were followed by E. A. Gilmore with several Ramblers, Mr. Peabody with a detachment of Oldsmobiles, Mr. Wilson with a Ford, and Ralph Coburn heading a detachment of Crestmobiles. There were several Grout steamers also and one or two Cameron cars under charge of A. E. Coburn. There were in all forty cars in this class, and it must be remembered that the trade had a large representation in the other classes, and that every dealer was represented in some part of the parade or other.

The last division was that known as the commercial, being a sub-division of the trade section and in charge of Fred H. Adams, of the Knox company. Sixteen vehicles did good duty, five of the number being Knox machines, two belonging to Hought & Dutton, one to Ferguson, and the fourth to a firm in Lawrence. The Oldsmobile company had two delivery cars, one of its own and the other the Moxie car. The Crestmobile company displayed its own delivery van, while the Edison Electric Co. showed two electric vehicle cars. There was also one steam and two Waverley electric delivery cars.

The parade was formed on Huntington avenue and then moved out along Dartmouth street to the north side of Commonwealth avenue, across to the north side at Massachusetts avenue, down to Arlington street, thence to Beacon street and to the Chestnut hill reservoir; returning over the same route. While it was 15 minutes in passing a given point, the entire trip consumed only 1 hour.

At the conclusion of the parade the majority of the participants visited the home of the Massachusetts Automobile Club, which kept open house. The visitors were here enabled to secure excellent views of the several trophies offered for the races at Readville.

## MINNEAPOLIS

## ON PARADE



PORTION OF TOURING CAR SECTION OF MINNEAPOLIS PARADE

MAYOR HATNER

PART OF THE LONG LINE OF HUMANOBOTS

Minneapolis, Minn., May 28—Turn your eyes toward Minneapolis, the greatest automobile center in the west.

Last night 340 owners, loaners and beggars of automobiles assembled for the first annual automobile parade given under the auspices of the Minneapolis Automobile Dealers' Association and the Minneapolis Automobile Club, and no parade ever held in the city aroused more interest and enthusiasm.

Chicago's parade was completely outclassed, think the local automobilists. In the number of machines, the success of the undertaking, and the popular interest in the event, the hopes of the most sanguine promoters of the parade were greatly exceeded.

The parade last night traveled over the pavements of Minneapolis for almost 4 miles, through crowds of people which packed the boulevards and downtown streets, so that the machines had but a narrow lane to travel through. In the downtown sections the crowds surged out into the street, so that many of

the drivers were compelled to keep horns sounding continually to keep an open path.

But from start to finish an accident not unforeseen difficultly marred the great parade. Down on Nicollet avenue, near newspaper row, one admirer of the big cars became so enthusiastic that he got too far out, and a tire pinched his toe. He yelled as a matter of principle, and the committee in charge of the parade was almost persuaded to grant him a pension as the only man or animal who had a complaint to make.

The parade, which has been the talk of the town for 3 weeks, was a convincing illustration of the firm hold which the automobile has taken on Minneapolis. From the big twelve-passenger "Seeing Minneapolis" car of the Minneapolis Journal, which headed the parade, down to the standard Olds runabouts, there were dozens of American makes and styles on exhibition. The parade moved through the streets at a 5-mile gait, and as car after car of similar make and style passed, the crowd began to real-

ize what the automobile business of the past year or two represents in commercial value.

Drivers assembled on Park avenue, and the excellent arrangements for the assembling strung the formation out along the Park avenue pavement from Twenty-ninth street down to Nineteenth. The principal effort was to keep the different makes and styles by themselves, and each division was assigned its position, and was ready to swing into line when the festivities began.

The Minneapolis Journal band, in the Journal car, and in five big touring cars, headed the parade. Behind them came Oldsmobiles, carrying a platoon of mounted police. The policemen had been relieved of their horses and had been placed in the low Olds cars, so they could readily jump to the ground if their assistance was needed.

Friends of the coppers, however, maintained that the majority of them were so busy holding on that they wouldn't have recognized a dog fight or a runaway. Certain it is that they

were not needed for practical purposes, but fully served the purposes of ornamentation for which they were designed.

The electricies followed the police lead. Minneapolis has comparatively few electric cars, as was evidenced by the small turnout last night. There were fewer than a dozen in line. R. R. Hand's big Columbia victoria headed the bunch with great effect, carrying Mayor Haynes and D. P. Jones, president of the council, and was one of the show pieces of the parade.

The prevalence of big touring cars was very noticeable. Knox, Pope-Toledo, Peerless, and others of the big fellows of 1904 pattern were seen in abundance. The White display consisted of six cars, and the impression made by the steamers was highly favorable. In fact, the bunch of Whites was one of the most talked of features of the procession.

The procession started down Park avenue shortly after 7.30 o'clock. The crowds had begun to gather before this time, and as the parade started found itself traveling between solid banks of people, who had more the appearance of a circus crowd than anything. Down the Park avenue asphalt the parade moved until Tenth street was reached, when it swung onto the Tenth street crescent, and over six blocks to Nicolet avenue. Down Nicolet to Washington, over to Hennepin avenue, and back to Tenth street the course was all over asphalt. By the time the head of the procession reached the down-town section, the dusk had deepened so that the lights on the machines began to show, and this added greatly to the effect of the procession.

H. E. Pence, of the Pence Automobile Co., in a 24-horsepower Pope-Toledo, was marshal of the day. He rounded the last machine into line and then started at an ordnance-breaking pace for the head of the column. But he never got there. The length of the winding line of machines was so great and the pace so good that the marshal couldn't get to the head.

Following the electricies, at the head of the procession, came the big touring cars, and from there the sections followed according to the size of the cars. The Knox cars were first, marshalled by W. H. Wheeler, and showed a strength of ten touring cars, seven runabouts and one big delivery wagon. Then came a bunch of Pope-Toledos, headed by Alf Pillsbury, of the Minneapolis Automobile Club. Then came Locomobiles, Haynes-Appersons and Wintons. The Wintons were strong, about fifteen being in line, and they made a big showing.

The Peerless cars took up a good section of the parade, and were followed by the Sterns. Then came the squad of six smooth running White steamers, in charge of H. S. Haynes. These were followed by the Packards, and then came the Yales, led by A. F. Chase, of Oldsmobile fame. Premiers were numerous. The lighter cars followed in great abundance. L. H. Fawkes swung into line a bunch of over thirty Ramblers, and these were followed by over a dozen Fordos. Then came Cadillac gals, nearly thirty-five of them being in line; and finally came a whole sea of Oldsmobile, big and little. Nearly forty of the Olds were in the line.

The details of the parade were taken care of by a special committee, which worked night and day to make the affair the success which it was. J. S. Spargo, of the Public Service Club, carried out the arrangements, and was aided by the dealers and the leaders in the Minneapolis Automobile Club. The affair was

strictly an exhibition, and all advertising features were left out. There were no races—nothing but a straightforward parade, and the motorists of the city believe it was the biggest thing of its kind that was ever held in a community as new to automobiles as the northwest.

As a result of the success of the first public demonstration of the year the Minneapolis enthusiasts are planning to carry out a number of other events, chief among which is to be a hill climbing contest next Saturday afternoon. This contest will be under the auspices of the Minneapolis Automobile Club, of which E. J. Phelps is president. The contest will take place on Kenwood hill, where the successful contest of last year was held, and there is every evidence that it will be fully as popular as that of last year.

Prizes amounting to \$100 have been offered to the successful contestants in the contest. There will be eight classes for the vehicles—for 8, 9, 10, 12, 14, 16, 20 and 24-horsepower cars. The dealers will again co-operate with the club to make this affair a big one. Other events are now being planned, and there will be something doing at least every 2 weeks throughout the summer.

An event which is now being talked of is a united run by the drivers of Minneapolis and St. Paul. The plan is to have the St. Paul machines come to Minneapolis, join the Minneapolis cars, and tour the lake and park system. The Minneapolis drivers will then escort the St. Paul visitors home.

#### KENTUCKIANS AFLAUNDED.

Louisville, Ky., May 30—Over 100 automobiles, washed and polished to spotlessness, and crowded with Kentucky's bravest and fairest, rolling through street and boulevard under the sun of an ideal May day, made Louisville's parade Saturday a gala sight not soon to be forgotten. "The biggest automobile demonstration ever seen in the south," is what it is being called; and if size can be measured by spirit, it was indeed an event of magnitude. There was a wholesome outpouring of cars that was a revelation to the natives and presages a great future for motoring in the Kentucky metropolis.

Six brand new Knox cars, three red and three green, each carrying three policemen in new uniforms, headed the procession and did better service in keeping back the crowds than any horse-mounted guard ever accomplished. Then came a big gasoline truck with the band, and behind it, President George L. Wilson, of the Louisville Automobile Club in his runabout, accompanied by Mayor Grainger. There followed half a dozen touring cars bearing the club's guests of honor, consisting of prominent city officials. The order of parade behind this was: Electric vehicles, runabouts, touring cars, commercial vehicles; each of which class was well represented.

Just before the parade started placards with large numbers were distributed, each driver being instructed to fix his number to the right side of his car and to maintain the place in line designated by his number. The effect of this was that not one driver left his place during the parade, a noteworthy departure from a very demoralizing custom.

The route of parade lay through the principal business streets which were driven at very slow speed, and then, at a livelier clip, out the beautiful Third Avenue boulevard to Jacob park.

Here at the garden, situated at the en-

trance to the park, long tables had been prepared and the occupants of the cars sat down to luncheon as guests of the automobile club.

It was an occasion of great good humor and enthusiasm, and the speeches of the chief guests of honor reflected surprise and satisfaction at the way the cars had been handled, and the reliability and safety of operation which had been demonstrated along the route. It was a matter of especial comment that during the entire parade not one horse had been frightened along the way, and not one of the motor cars had dropped out of line. In no address of warmth and friendliness to automobile interests Mayor Grainger stated that he was working for an appropriation to construct a great boulevard to encircle the city and connect its beautiful parks with one big driveway. This is a most welcome announcement to local drivers, and if the plan is carried out it will give Louisville one of the finest park systems in the country. Both press and public have been exceedingly flattering in their applause of the club's parade and its unusually successful conduct, and much has been accomplished through it for motoring in this section.

#### HUNDRED AT WORCESTER.

Nearly 100 automobiles were in line Decoration day in Worcester, Mass., when the first motor car parade arranged by the Worcester Automobile Club was held.

Thousands of spectators watched the cars pass through the streets and at the fair grounds the crowd was so large that a special service of order had to be organized.

Each car was provided with one or several American flags, while every driver was given a club pennant.

The races which were run in the afternoon at the agricultural fair grounds in Green-dale attracted a large attendance. No fast times were made, as the cars were all those of ordinary usage, but the country folk seemed well pleased and amazed at the easiness with which motor cars and motor cycles could go miles and miles without accidents.

Following is the summary:

Two miles for gasoline machines, 1,000 pounds and under—Won by Asa Goddard; time 6:02.

Two miles, gasoline machines, 1,000 to 1,500 pounds—Won by Joseph N. Magna; time 4:31 1-5.

Three miles, two-cylinder cars—Won by M. Percival Whittall; time 6:31 2-5.

Electric machines, one mile—Won by Melvin E. Dixon; no time taken.

Two miles, racing machines—Won by Percival Whittall; time 4:08 4-5.

Five miles for Telegram silver cup—Won by M. Percival Whittall; time 10:00.

#### ST. LOUIS TOUR OBSTACLES.

It will probably be discouraging to motorists who contemplate making the St. Louis tour, but some humorist states that he has been over the route securing samples of local ordinances, adding: "Thus far I have collected eighty-six bells, fifty-three horns, sixty-five sets of numbers, seventy-one bumps, an attachment for sprinkling the streets, and thirty-four brakes to prevent a tracture of the speed ordinances. Each of these articles represents the best thought of city and town government on route, and I have 300 miles yet to cover. By the time I reach St. Louis I expect there will be just room enough left in the vehicle to necessitate my winking the last 50 miles of the trip."

## RAIN SPOILS BOSTON MEET

**Thirteen Thousand People Visit Readville Track Only to Be Turned Away After a Few Contests—Mercedes and Ross Steamer Defeat Fiat Car—Postponed to Saturday Next**

Boston, May 30—Rain—wet, diabolical rain—came down in torrents, making a veritable quagmire of what a few minutes previous was a good, smooth track, and necessitated postponement of the automobile races under the auspices of the Massachusetts Automobile Club at Readville, yesterday afternoon. The heavy shower brought with it the keenest disappointment to 13,000 persons, and curtailed for the day, at least, the holding of what gave promise of being the greatest automobile race meet ever held in this country—a meet which, in point of attendance and excellency of entries, stood without a rival in American history, which promised record work on the part of the contestants, and which perforce was laid aside until next Saturday afternoon, when the attendance and the racing will unquestionably be the greatest ever known, for it was determined by Chairman Wallace, of the club race committee, that the admission then should be free, except to the grand stand, admission to which will be gained by the displaying of the sent coupons for yesterday.

Never in all the history of the sport in this country had such a large attendance of crack racing machines been seen at a meet. The automobilists turned out in unprecedented numbers to make this an automobile derby, one that should last for years in the memory of the enthusiast and one that should prove a model for all following meets. It was truly an automobile gathering. Inside the rail, two deep, cars were lined up all down the stretch, while in the openings between the stables every available place was filled, and the monster grand stand had not a single vacant seat. The ground outside the quarter stretch was black with people, and even though the heavens were overcast and rain was threatening, there seemed to be no end to the arrival of spectators. Finally every seat and every admission ticket had been sold, and then it was determined to admit no more persons to the track, which contained as large a crowd as it has ever held in its history.

The track was heavy, but after the machines had gone out and tried it for a tuning-up it became well rolled down and prospects of record work were good. But the heavens were overcast, and just as the first race was called, promptly at 2 o'clock, it commenced to sprinkle. It was just a shower, however, and the first race, a trial heat in the 5-mile touring car class, was started.

There were four contestants, Nagle in the Fiat, Draper's Packard, Donahue in H. W. Whipple's Mercedes and H. L. Bowden driving his own high-powered Mercedes. It was a flying start, the machines going over the line well bunched, but there was an inability on the part of the Draper car to get going, and Mr. Bowden seemed to have some little difficulty also in getting under way. At the quarter they both drew out of the race, leaving Nagle and Donahue to fight it out. The Fiat went to the fore turning into the back stretch, and made the running all the way for the 5 miles, Donahue putting up a much better fight than was anticipated by many and hanging

to his antagonist like a dog to a bone. At one time he came alongside, but that was all, and Nagle won by a few hundred yards.

The second heat brought out A. E. Morrison, in the Peerless, and A. C. Webb driving W. F. Mayo's Pope-Toledo, these being the two cars that are due to drive a match race later in the tournament. Webb, although having severely cut his leg in an accident on Sunday, looked none the worse for wear. Both machines got away together and it looked like a pretty race from the start. They turned into the back stretch abreast and then Mr. Morrison was seen to take the pole and to steadily pull away from Webb, having 50 yards to the good at the mile. This distance he increased until he had a quarter of a mile on Webb in the fourth mile, and then he suddenly slowed down, evidently believing that this was his last mile. He quickly perceived his error, however, and started again just as Webb was within calling distance. In the last mile both machines went their utmost, and Mr. Morrison finally crossed the tape 250 yards to the good.

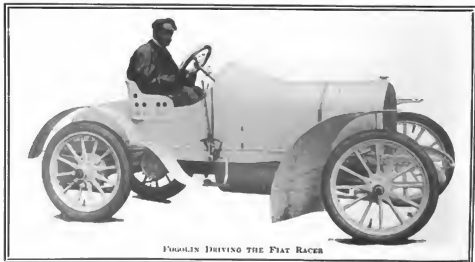
The next event was the first heat of the 10-mile free-for-all, and it brought out the Bowden Mercedes, driven by Charles Basle, the Ross steamer, handled by its owner, and the Fiat, driven by Fogolin. The Ross steamer attracted attention owing to its peculiar construction, resembling in no small degree a torpedo, and when in flight sending out a sound like that of a locomotive coming into a station. The car simply glided along the track, and to many it looked as though it had the race before the start. At the start the Fiat had the pole, Ross second place, and Basle the outside. No sooner was the word given than the clever little Frenchman shot his car to the fore, rounding the turn in a twinkling, and like a whirlwind running away from the lowly steamer and the big Fiat. Basle had his car well in hand and on the back stretch opened a great gap between himself and the others, while the steamer "manked" ahead of the Fogolin car. Basle showed clever work in handling the Bowden car, going like the wind down the stretches and throwing off his power and coasting around the turns, which he held in perfect manner.

It was clever work for both the car and the operator, was this running away from the mile-a-minute steamer, and the latest importation from Italy. At the mile Basle had 20 yards on Ross, who had 100 on Fogolin.

Then commenced the battle, the Frenchman leading all the way. Again and again Ross tried to get into closer relations with the Frenchman, but while he increased his speed he could gain nothing on the fleet Mercedes; while Fogolin fell further to the rear each succeeding mile. It was *fas* work, Basle evidently being out for the Foshiek cup, and endeavoring to try out the men he would have to meet in competition for the Boston Herald trophy. The 5 miles was covered in 5:54 2/3 and the full distance was ridden in 12:24, Basle winning by about half a mile over Ross, who was 300 yards ahead of Fogolin.

Then came the mighty Barney Oldfield and the famous Winton Bullet II. With him came Otto Neetrom and the Stevens-Duryea Spider, another hard proposition, and J. W. Hillyard with the Deannville, with which he won honors at Philadelphia. The Bullet and the Spider were closely watched. Just as they appeared to do battle the rain came down in torrents and fairly swamped the track. It looked bad for further racing, and the officials held a council of war. Just then Oldfield drove down to the judges' stand and said "It's unadvised to ride in these conditions. One can't keep the track." Chairman Wallace, of the committee, jumped into the Bullet, and was taken for a mud bath around the racing surface. At first the wheel of the racer got little traction, and the car remained virtuously stationary. Then she went with a jump, only, however, to slow down, as neither man wanted to take a chance of going into the fence. The speed was slow but the mud thrown up by the wheels was so great that both men looked as though they had been rolled in the sticky stuff. There was no question as to the dangerous condition of the track, and after a short conference it was announced that the races were postponed until Saturday afternoon.

The postponement, although absolutely necessary under the conditions, brought with it bitter disappointment to the thousands, many of whom had come long distances to see these trials of skill and speed, and to see which man should have his name first engraved on the Boston Herald trophy, which is admittedly the most valuable trophy that has ever been offered for an automobile contest.



FOGOLIN DRIVING THE FIAT RACER





H. L. BOWDEN ON HIS FORD 999

H. R. HELLER, JR., ON HIS RICHARD-BRAZIER

After the announcement had been made, however, the crowds came out of the grounds not a single man of them disgruntled, but rather pleased with the decision made by the committee of the club. The roads leading from all sections of the country to Readville were crowded with automobiles, which made even a greater showing than did the record parade of Saturday. It was a magnificent turnout and in the opinion of persons who have witnessed every automobile race must held in this country, was the greatest aggregation of automobiles ever known. It was a monster gathering and showed full well what a great hold auto-racing has secured.

#### FIRST MOTOR BOAT RACE

New York, May 30—From 3,500 to 4,000 people saw the power boat races today off Port Washington, L. I., which were given under the auspices of the Manhasset Bay Yacht Club.

Only four motor boats started and the unexpected happened. F. H. Waldorf's Japanaky, 70 feet long and fitted with a 41-horsepower Speedway motor, won the principal event, a 19½ miles race, in 1 hour 6 minutes 29 seconds, almost 7 minutes ahead of the 25-horsepower Flat boat and more than 10 minutes better than the 18-horsepower Panhard motor boat.

W. K. Vanderbilt's boat fitted with a 60-horsepower Mors motor, was disabled in a collision with the Panhard craft, during a preliminary spin. Taking into consideration the difference in horsepower between the three boats that finished the race, the performance of the Italian and French craft is very good.

#### DEBUT OF BALD

Hartford, Conn., May 30—There were no world's records broken at yesterday's automobile races at Charter Oak park, but that did not matter with the 8,000 spectators who had come from all over this section of Connecticut. They wanted to see races and Eddie Bald, and they seemed well satisfied, judging from the enthusiasm they showed during the several hours of sport and the hearty ovation they gave the winner's and Eddie.

It was the largest gathering of motor cars and motorists ever seen in this vicinity, the weather man having been good, the whole of motordom seeming to have made the park its rendezvous, and everybody seemed pleased.

There was only one deception. The big Ford 999 formerly driven by E. C. Hausman did not come up to the expectations of the crowd, nor of Jed Newkirk its driver. Something was wrong because it covered 5 miles in a record breaking attempt in the slow time of 6 minutes 59 seconds, whereas it has done a good deal better. The record still stands at 4 minutes 44 seconds.

To the first race, for single-cylinder cars, run over a distance of 3 miles, M. Warner on his little Orient buckboard ran away from the start, leaving R. Tomlinson, Rambler, and C. Choney, Oldsmobile, far behind. The winner's time was 6:31¼.

Then came the 2-mile race for light touring cars, of from 8 to 12 horsepower. Walter J. Ziegler was the only contestant to face the starter and covered the distance in his Pope-Hartford in 3:10¼.

Eddie Bald was next on the program and when he appeared on the track with his new Columbia racer he was tendered a welcome which probably reminded him of yore when he was still the cycle champion. He rode a 2-mile exhibition in 2:46½, amid continuous cheering.

In the 5-mile race for motor cycles there were seven starters and Coates, O'Malley and Soll, all on Columbia machines, finished one, two, three. The winner won by almost a mile in 6:34 1-5.

There were only two starters in the race for steam cars and G. Russell, on a Stanley, had no difficulty in winning from G. Dewey, who drove a Grant car. The 3 miles were covered by the winner in 7:08½. An exhibition followed, in which H. W. Alden, chief engineer of the Electric Vehicle Co., rode 2 miles in 3:27½ in an electric vehicle.

Bald then reappeared and tried to lower the mile local track record, which is 1:12. He did not succeed, going 14½ seconds slower. The 3-mile race for four-cylinder touring cars was declared off, there being only two contestants, one of whom did not wish to start, his father opposing the idea of his taking a chance in an open contest of such magnitude. E. F. Bradley, the party in question, then rode an exhibition mile in 1:35½ in his 24-horsepower Peerless car.

The 2-mile race for testing cars brought three competitors in line and was won by J. P. Grady in 3:24½. All three cars were Pope-Hartford.

Then came the attempt by Jed Newkirk

against the 5-mile record for circular tracks. The time for each mile was 1:20, 1:18½, 1:20, 1:37½ and 1:24, or 6:30¾ for the 5 miles.

The last event was spoiled on account of rain. It was reserved to the winners of previous races and M. Coates on the Columbia motor cycle won it easily. Before the finish of the race the majority of spectators had started for shelter from the rain.

#### MOTOR CYCLE HILL CLIMB

New York, May 31—Metropolitan motorcyclists had great sport Monday morning on the big hill of Fort George, testing their moments in competition in the second annual hill climbing contest of the New York Motorcycle Club. There were nineteen contestants. The best time up the hill was made by a boy. He did it in 59.45 seconds, but was disqualified for violating the rules by using the machine of another contestant, that of F. W. Rogers, who won the first prize. W. T. Marsh, of Boston, was also disqualified. When he went up the hill his time was not taken through fault of the officials. On a second trial his cycle stopped. He said a team had blocked the road, but the referee decided this excuse to be fictitious.

The distance from the start to the finish of the course is 2,612 feet. The result of the test showed that the weight of the rider is a very important factor. Walter Jones, who finished sixth, is an 80-pound boy. For timing the race a new electrical device that is an invention of a member of the Automobile Club of America, A. L. McMurtry, was used. It is thought to be an improvement on the French apparatus used hitherto by automobilists.

Following is the score made by all the contestants not disqualified:

P. W. Rogers, New York, Indian.....	1:00
G. H. Curtis, Hammondport, Hercules.....	1:02 4-5
H. T. Bedell, Hackensack, Indian.....	1:05 1-5
G. Andes, New York, Indian.....	1:07 4-5
F. A. Baker, New York, Indian.....	1:10 2-5
G. B. L'epere, Brooklyn, Indian.....	1:11 3-5
G. N. Holden, Springfield, Indian.....	1:12
C. Gustafson, Springfield, Indian.....	1:14
W. Jones, New York, Marsh.....	1:14
H. A. Gileman, New York, Rambler.....	1:15 2-5
J. J. McKeen, New York, Rambler.....	1:24
S. Hotchell, New York, Indian.....	1:29 1-5
A. J. Banta, New York, Rambler.....	1:30
R. G. Betts, New York, Indian.....	1:31 1-5
D. Bruce-Brown, New York, Rambler.....	1:35
M. E. Toppel, New York, Indian.....	1:35 3-5
F. W. Horroberger, New York, Marsh.....	2:10 3-5



# ONE RACE AT POINT BREEZE

## The Other Events of Philadelphia's Opening Race Meet Were Runaways—Poor Track and Slim List of Starters Render the Affair Uninteresting—Several Protests Made

Philadelphia, May 28—The Philadelphia automobile races, held at Point Breeze track today under the auspices of the Philadelphia Automobile Trades Association and the Automobile Club of Philadelphia, were far from interesting as competitive contests. One race alone saved the day. This was probably the closest finish of motor racing history, for throughout the race hardly a length separated Webb Jay in a White steamer and Walter Winchester in a 10-horsepower Franklin. These drivers passed and repassed each other and the result was in doubt to the very finish. The crowd, for the most part occupants of automobiles along the fences and inside the track, saw that for which it had paid admission and was satisfied. All of the other races were mere runaways; not contests in any sense of the word.

Barney Oldfield was the star attraction. In Bulletin II he had two races to himself. But after winning the 5-mile open handily, with his fastest mile only about 1:11, the track champion broke down in the second mile of the 15-mile race. This break came through going too fast down the third leg of the course, the track being laid out three-cornered, like a yacht racing course. Oldfield was compelled to put on the brakes hard and broke the driving shaft. J. W. Hillyard, the only other driver who dared oppose Oldfield in either of the races open to him, finished the 15 miles by order of the officials, in spite of the fact that Nathaniel Huggins, owner of the 40-horsepower "Paris-Madrid" Deauville which Hillyard drove, wanted to call his man from the track. Hillyard drove a special match race against the Franklin car late in the day and for a few miles it was a clever contest. The Franklin led for a time and it seemed as though something was wrong with the Deauville. Finally the machine started well and then for a time burned up the track, catching up and passing the little Franklin skeleton.

Oldfield, Hillyard, Wilkinson, Winchester and Webb Jay in the Winton, Deauville, Franklin and White cars were the only real racers of the meet. Some one had entered F. A. La Roche, but he did not drive. The Fearless racers were also entered, presumably by Banker Bros., but none was present. Outside the quartet mentioned the racing machines used were "home made" affairs and each had its own distinctive speed, keeping them well apart in the running. This made the finishes, as a rule, scattering and most uninteresting.

The track was a fright. The surface was rough as any poor road. In fact, a tourist

would have reviled roads presenting no better surface than this track. It was loose, and Oldfield in his dives round the turns scattered dust and mud, caused by sprinkling, to points far beyond the fence. In the track surface are stones and even pieces of glass, so one of the contestants declared, and to force fast cars to drive on the track in its shape of today was dangerous. Owing to the dust one man could not follow another and see anything. John Wilkinson said before the start, "If I strike that dust cloud I will slow down at once."

It was the desire to make interesting races that brought trouble to the promoters and to Chairman Pardington, who has on hand several protests which must be decided by the racing board. The promoters sent out entry blanks classifying the races according to the new system and 2 days before the meet decided to run the contests according to the advertised horsepower of the cars. Notifications were supposedly sent to all contestants, but Mr. Huggins claimed not to have received his and drove against Oldfield only under protest. Under the legal classification system Mr. Huggins would not have been required to meet Oldfield. In the fourth event, a race for stock cars of any motive power of 16 horsepower or under, Mullins in a Ford protested the Franklin skeleton as not being a stock car. The officials hesitated and finally stopped the race and fought the matter out, finally allowing the Franklin to run with Winchester up.

The third protest, made by Huggins against being forced to drive in the 15-mile race against Oldfield, will be withdrawn, as Oldfield broke down and was out of it at 2 miles. Just previous to the start of this race Huggins said to Oldfield: "Don't rub it in, Barney. I'm the only one that has the nerve to drive against you."

The opening race of the day was for a distance of 5 miles for stock cars of any motive power, of 8 horsepower or under. A Cadillac, with E. Wikkie driving, had no trouble at all in winning, with Ford, Mullin driving, second, far around the track, and the entry of Gawthrop & Wister, with E. Albus driving, third. G. Jason Waters drove his own 8 horsepower Mors and dropped out at 2 miles. The time was 8:30½.

The second contest created a buzz of interest as the trim little Franklin with curly haired John Wilkinson driving, came up the track. Wilkinson got away to the head in the field of five, four of the entries having been cancelled, but did not take him long to get under way and when he did, Webb Jay in the White

steamer was passed, but hardly left behind. Jay became dangerous toward the close of the 5 miles and Wilkinson was given the word which sent him along faster. At the finish Wilkinson had the race by a quarter-mile over Jay, with Mullin in the Ford third, a half-mile back. The race for last place was close and interesting to those on the inside, as George Banker, of Banker Bros., the old time cyclist, drove a 10-horsepower Autocar on a wager against W. C. Allison in a 12-horsepower Autocar, and won. Banker looked behind with glee as he crossed the tape, Allison having dogged him all the way. The time of the race was 7:09½.

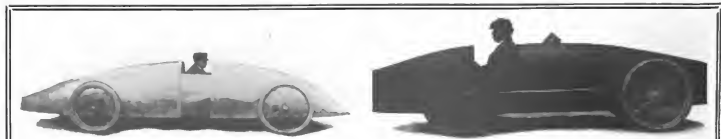
Again there was a hum of interest when away over in the paddock the Winton Bullet started up its thunderous noise and Barney Oldfield sailed forth. There were seven entries for the race, but five were cancelled and only the Huggins entry with J. W. Hillyard driving, made good. The distance was 5 miles. Oldfield drove to win and no more, doing 6:15½ for the distance, his fastest mile being 1:11. He won by 200 yards.

Then came the Franklin again, this time with Winchester up. For a time the White steamer with Webb Jay driving seemed dangerous, but trouble came to it and Wilkinson's pet won with a wide margin to spare, the Ford of John Wanamaker, with Mullin, the protesting driver, at the wheel, being second, and Vogel in Cadillac third. The time was 7:44½.

Some interest was created by the appearance on the track of thirteen motor cyclists, representing nine different makes of machines. The thirteen men were started from a stand still and the one with number thirteen on his arm first came to grief. There was no real competition, although there were some close brushes in the stretch. A young man by the name of Erhardt, an Indian won by a fairly close margin from J. Endicott on a Mors, with V. Simmons on an Indian third. The time was 8:20, the second man doing 8:26.

It was in the 15-mile special race for racing cars, with \$100 to first, \$50 to second and \$25 to third, that Oldfield stopped at 2 miles. Huggins finished the 15 miles in 19:27. Oldfield had just reached the judges' stand when the smash occurred. He sailed round the corner and to the outside, where he dismounted, while people running over the track were in imminent danger of being run down by the fast flying Huggins. There were five other entries in the race, all of whom were driven out by the appearance of Oldfield.

The real race of the day came unexpectedly in the next event. In it the start of Webb Jay, White steamer, was beautifully made and Jay, with a rush, gave the Franklin car a heart-breaking piece of chasing to gain the lead at 2 miles. Then Jay tacked on and held his position just far enough back to get out of the dust for 2 more miles. Then, "He's gaining, he's gaining," shouted the crowd, and there



LOUIS R. ROSS, OF BOSTON, IN HIS NEW STEAMER

FRANK HURDIN, OF BOSTON, IN THE NEW STANLEY RACER

was a perceptible flutter all along the line. Jay did gain slowly and surely and passed to the lead. Then Winchester bent low to his work and down the stretch the pair came neck and neck. Two hundred yards from home the Franklin sailed ahead of the White and the race was won by a length. The time was 6:58.

Another race followed which, for a time, promised to bring a surprise. The Deauville was matched against the Franklin—40 horsepower against 10—and it did not seem that there could be a real race. At the start from a stand still away went the little Franklin for an ultimate lead of 200 yards. As a mile went by there was a perceptible flutter. The opening mile was 1:23. Then the Deauville picked up and shot by as though the Franklin were standing still. Hillyard won by  $\frac{3}{4}$  of a mile in 6:59.

The final event was a 3 mile race for stock

cars of any motive power of 20 horsepower or over. But Webb Jay with his 10 horsepower White entered. The way in which the White ran with the 24-horsepower Peerless in close chase was a surprise. Jay won, with the Peerless second, the time being 6:36 $\frac{1}{2}$ . J. Betts, in a Mors, was a participant, but bursted a tire and had to quit.

There were many prominent spectators, among them being the mayor of Philadelphia. Hundreds came in automobiles, that being the best way to reach the track, and these occupied

their machines, the grand stand being only about half filled. The meet had been poorly advertised to catch the general public, as no press work could be done and the posters did not tell the story, which, after all, was perhaps a good thing.

The officials were: Referee, A. R. Fardington, chairman; A. A. racing board; judges, Isaac Starr, Jr., president Automobile Club of Philadelphia; Henry G. Morris and Howard Longstreth; timers, M. R. Muckle, W. E. Willis, A. G. Chadbourne and M. D. Layton; starter, W. H. Roep; assistant starter, W. F. Indolph; clerks of the course, George Banker, F. L. Neal and E. S. Maithy; assistants, William Morgan, F. V. Hey and John O. Dew; announcer, H. L. Cullen.

While the meet cannot be called a success its promoters are not discouraged and another may be run later.



## GOOD ROADS ON THE COAST

**L**OS ANGELES, Cal., May 28—Ten miles west of this city is the beautiful valley of Chahuenga. Two years ago the people there began building a boulevard and about a dozen automobiles from Los Angeles went over the road in July 1902. The cars were nearly all electrics and Oldsmobiles, and only one avenue had been completed then. Last spring Hollywood celebrated again with a good roads day and had an automobil- race and hill climbing contest.

Early this month when the 100-foot Sunset boulevard was opened all the way from this city to Laurel canyon at the bottom of Chahuenga valley, the Hollywood board of trade decided to celebrate on Saturday, May 14, with a parade from Los Angeles and through the valley, ending with speechmaking and receptions at the "Outpost" in the lower end of the valley, and at the home and studio of Paul de Longpre, the famous painter of flowers at the upper end of the valley.

The automobile section of the parade through this city and out over the new boulevard was in charge of Charles Fuller Gates, secretary of the Los Angeles Automobile Club and the coast Motor Age representative, and the carriage and tally-ho section was organized and led by Colonel J. W. Fife. The latter section formed on Broadway above Fifth street and marched to the tunnel, headed by Colonel Fife and staff, with bugle corps and the band from the Soldiers' Home. At the tunnel's mouth the carriage and horse cavalcade turned out California street and into Bellevue avenue, following that thoroughfare to the wide new boulevard.

The automobile section formed in front of the White garage on Broadway, south of Sev-

enth street. All the automobiles bore pennants on which were these words, "Hollywood Boulevard Opening Day." The parade covered the town and then moved out Lake Shore drive to Sunset boulevard, where it was to meet the carriages and trolley cars that all together might proceed to Hollywood.

The parade was led by the club directors in a 1904 Winton. Archie Thompson's Winton came next, then five White touring cars, two Peerless, three Tourists, four Fords, a Stanley, an Autocar and then a long line of Oldsmobiles, a Columbia and various other makes to the number of over sixty.

Along the line of march were a number of other cars waiting to fall in and a few made the mistake of dropping into the horse drawn vehicle line farther up the street. Still others, who did not wish to take part in the parade down town, waited for it on the new boulevard. Mills & Shipley's big emergency wagon brought up the rear, loaded with tires and supplies.

There was trouble a plenty at the sharp little hill from Lake Shore drive up to the new boulevard, and as many as three cars at a time had to back down and try easier approaches. One object of having this parade was to have the city officials see this little hill, where a bridge should be built along side of the cement bridge of the trolley line to Santa Monica.

The boulevard was decorated with \$10,000 worth of flags loaned by the Merchants & Manufacturers' Association for the occasion. It was the only festa this city will have this year and it seemed like carnival time to look down the long, wide avenue and see the palm branches, flowers and flags waving in the air.

The carriage and tally-ho parade kept its formation all the way to the foothill city, but when the automobiles reached the wide boulevard, which has a liberal speed limit, there was a race at once on among the White steamers, the big Columbia and several other high speed cars, with the runabouts following as fast as they could.

There were a few accidents of minor importance. One big car at the start banged its radiator into a Tourist runabout and had to withdraw; an Oldsmobile collided with another Tourist at the end of the run and bukeled a wheel, and one or two machines stopped along the way for various causes.

Several thousand people, most of them the leading citizens of this and adjoining cities, who had come on personal invitation—800 being taken out on special cars of the trolley line—gathered in the hot sun and listened for hours to speeches on good roads by the "Wizard of Hollywood," H. J. Whitley; Mayor Snyder, of this city, Generals Otis and Sherman; Governor La Grange, of Colorado; Judge Risher; Francis Murphy, the temperance pioneer; W. C. Patterson; T. W. Brotherton, and others. W. H. Houggee presented a 50-foot flag to be swung from Mount Hollywood and luncheon was served at the Outpost, General Harrison Grey Otis' summer home, built in a natural amphitheater where, in General Fremont's time, stood Fort Chahuenga and near where sundry horse thieves and brigands were swung from the limbs of an old yamcore tree still standing.

The display of cars and the success with which they were handled were convincing proofs to the city officials that automobiles are not such bad things as some people and papers would like to make them out.

# MOTOR AGE

Published Every Thursday by  
THE TRADE PRESS CO.  
1303 MICHIGAN AVENUE CHICAGO  
Telephone Calumet 7011

New York Office, 114 West 18th Street,  
London Office, American Publications  
Bureau, 15 Manor Park Rd., Haringdon, N. W.

Entered at the Chicago Post Office as Second  
Class Mail Matter.

Subscription, Two Dollars per Year  
Foreign Subscription, Four Dollars

Any Newsdealer may obtain Motor Age through  
the Western News Co., Chicago, or any  
of its branches, on a returnable basis

## DEMONSTRATING UTILITY

**R**ECENTLY a doctor of Port Wayne, Ind., was called to attend an urgent case 40 miles distant. He jumped into his automobile and drove the 40 miles in 85 minutes, or at the rate of 28 miles an hour. There is no municipal or state automobile law which permits a speed of over 20 miles an hour.

The doctor reached his patient 3 hours sooner than he would have done had he waited for a train, and thereby saved a life.

He was numbered as a possible criminal and did actually break the law. He was not arrested. His speeding had served a good purpose, and the people of the community recognized and approved of it.

When it has been generally shown that automobile speed means a greater efficiency in the work of the world as well as a greater intoxication in its play, the people will gladly lay down the weapons that have been raised against motoring and acknowledge the cause of speed, which has come to dissipate congestion and reduce the concomitant dangers of transportation.

## AUTOMOBILE HORSEPOWER

**M**OTOR car building is in the midst of a craze for high power. Both touring cars and racing machines are being built with engines of truly wonderful energy. It is not necessary. It is purely a fad.

The lightest car of the twenty-nine starters in the French Gordon Bennett eliminating trial race won the event. True, it was of 85 horsepower, but the others boasted engines of 100 horsepower or over. Comparatively, it showed that a lesser power and a lesser machine was a more nimble combination than any other.

Great power and great weight might do great things under certain conditions. Under the conditions of fast road usage they were proven inferior to a smaller and lighter car which was more easily adaptable to the exigencies of running a fast race over a slow road.

In ordinary automobilism the conditions are parallel. Efficiency in daily service may be taken to represent speed in a race. Power is not the only element to be considered.

A certain road makes a certain performance possible. All the power in the world will not permit exceeding this possibility. Only

an ordinary power is necessary to come up to the fixed limitations.

Greater power is a fad.

Power should be increased with the load. Work performed is more important than the spattering of mighty engines.

In building an automobile to carry four people it is wasteful energy, in both manufacture and use, to provide a power that is many times greater than is necessary to accomplish the limited amount of work made possible by the conditions of highways and traffic.

The very fact that several makes of single-cylinder cars are every day successfully carrying loads the equivalent of four grown persons at speeds in excess of the speed limits of the communities and equal to the speed possibilities of the highways, shows that extraordinary power is a style rather than a necessity.

An automobile should be judged by what it will do—not by its horsepower.

Motor cars come to supplant horses. To fully accomplish this end they must be exactly adapted to the specific uses to which they are introduced. The sum total of their purpose is not to provide the community with a dangerous toy in the form of horsepower.

To serve any purpose well a vehicle must be operative with minimum expense and trouble. Increase of power beyond certain limits increases expense and trouble.

There is no utility in providing power enough to haul a ton of coal when only two persons are to be carried. Club runs show that small cars with small loads get in at the finish just as certainly as monster cars with small loads.

A 100-horsepower motor on an automobile designed to carry four or six people over ordinary American roads at a maximum speed within the safe limit of such roads is parallel to the hitching of four horses to a boulevard ransabout.

The permanent success of the automobile industry lies in the good the motor car does the community. Excessive horsepower is more apt to lessen than to increase this good.

## TOURING FIZZLES

**T**HE New York-Gettysburg tour of the Automobile Club of America was a fizzle. It fizzled on the first lap. This is not greatly to be regretted in itself, for the tour was a local affair and its untimely wind-up did not affect directly a great number of people.

It is only as an example that the tour is deplorable. If the premier automobile club of this country cannot successfully negotiate a club tour, who can?

Looking at the situation from such a pessimistic standpoint, the subject of long tours is certainly discouraging, and if thought flies at once to the projected St. Louis tour a hesitation as to the probable outcome of such a tour is natural.

On the other hand, however, is the comforting thought that a New York club is not as likely to make a success of an extended tour as a club in a smaller community. Its members are men who have not the time to spare even though they may have money in clunks. Their existence is one of quick action.

In bicycling it was shown that the cyclists of smaller cities were more apt to find it convenient to take an extended vacation than those of the metropolis.

Prospects for the St. Louis run must not be judged by the A. C. A. run fizzle. There are hundreds and thousands of automobilists

throughout the land who are willing to make the occasion of the St. Louis tour their set and carefully planned summer vacation. These persons will constitute the majority of the participants.

The fizzle of a metropolitan club run has no real effect upon club or association runs in general, or upon the national run to St. Louis, in particular.

When the authorities of Evanston, Ill., raised the automobile speed limit from 8 to 12 miles an hour the local paper shouted "Now let the law be enforced." There are a few Chicago motorists who can seriously and truthfully testify to the fact that the law has been enforced, generally to the tune of \$25 and costs.

The farmers along the route of the late endurance run are still prepared to do business and when an automobile stops in the neighborhood teams and ropes are forthcoming without even the asking. Maybe all of the starters have not come through yet.

The French automobile papers are commending the builders of the Richard-Brazier cup race car on their skill in producing a small, light car which was able to beat all the big racers of France. This little toy, you know, has only 85 horsepower.

A Pittsburg man has disposed of all his fine horses, built a \$175,000 garage and bought \$60,000 worth of automobiles. A Pittsburg concern is investing \$200,000 in passenger and freight motor vehicles. Now how about the horse?

There's hope—or a lack of news—when the big dailies devote the greater portion of a column of the editorial page to defending the raising of a speed limit or disapproving the stoning of automobilists by hoodlums.

Chicago dealers are unanimous in affirming that the backward spring has had no effect upon sales, but that it has been of excellent service in giving the factories a chance to catch up on back orders. Got it?

At least one Milwaukee sidewalk has the right idea. He thinks that if automobiles are compelled to carry numbers "every buggy, hack and wagon should also be numbered." But then he owns an automobile.

The latest thing in automobile literature is a humorous volume entitled "How To Go to Get His Berg." It is bound in a sickly grin and is published by the Automobile Club of America.

Those Metropolitan editors who howl about excessive speed ought to get in an automobile and try the game at low-gear-retarded-spark-throttled-intake-slipping-clutch speed.

As special correspondent of MOTOR Aet, Count Chassis de Garage left New York this week to attend the Gordon Bennett cup race.

Talk about veterans in the Decoration day parades! Why didn't some of the automobiles of the vintage of 1895 get into line?

It must be a painful task to dutifully "scour Lead" a week-old story that has been published in another paper.

# CALIFORNIA RECORD TRIP



**S**AN DIEGO, Cal., May 28.—The road from Los Angeles to this city, along the coast, particularly for the last 70 miles, is almost an impossibility for automobiles. South of Oceanside there is no well-defined highway and the usual route of motor cars is



ON THE ROAD BETWEEN LOS ANGELES AND SAN DIEGO

down the inland route from Los Angeles, which is about 40 miles longer than along the coast. Those who do come down the coast usually turn inland from South Oceanside or at the old mission of San Luis Rey, going up the river of that name. Once in a while a big car attempts to make the run all the way down the coast, and, with the aid of horses, gets through the bad sand sinks and over the big grades.

Last winter an 18-horsepower Deauville belonging to a Massachusetts tourist named Huggins, took the inland route to Pala, dodged the big grade there, followed the San Luis Rey river to Oceanside, and came down the coast for the last 42 miles. What was left of the car was shipped north on an ocean steamer and reassembled at Pasadena.

Three years ago Charles Fuller Gates, with E. R. Waterman, of Fresno, went up the coast from this city in a new Winton, after coming down the inland route. They pulled into Del Mar, 20 miles, the first day and only broke one leaf of one front spring. The second day they reached San Luis Rey mission, some 20 miles for that day. From noon till late that night and until 8 o'clock in the morning of the second day after they worked on their car before they could get any farther.

At noon on the fourth day the second front spring was broken in seven places, and 2 hours at the only farm house in 30 miles allowed them to go on with a make-shift spring. Late that night they reached Capistrano, making 30 miles for that day. Repairs were done by 5 in the morning of the fifth day, and, as it was excellent road all the way to Los Angeles, they succeeded in reaching a repair shop there. The repair bill for that trip was about \$100. Since then very few cars have tried the coast route and those were of the Oldsmobile type.

A short time ago a regular Stearns touring car came over the coast route the whole distance on its own power in 9 hours 45 minutes elapsed time, the stops on the road totaling 2 hours; thus the net running time was 7 hours 45 minutes. The distance down the coast route is 145 miles, of which at least 25 per cent is grades, fords and heavy sand. The time and stops along the way was officially attested by postmasters, automobile garages and newspaper offices on the route, so that there could be no doubt as to this remarkable record.

The car was driven all the way by A. F. Worthington, the coast agent of the Stearns and proprietor of the Worthington garage in

Los Angeles. He was accompanied by W. H. Harrington, a Los Angeles merchant, William I. Schroeder, now coast agent for the Dumont car, but formerly with the Winton and Stearns factories at Cleveland, and the Morton Agt man.

For the first 40 miles to Santa Ana the country is fairly level and good time was made over this stretch, although the crooks and turns in the road averaged one or more to the mile. None of the party but the Morton Agt man had been over the route before, so Mr. Worthington had to depend upon his judgment all the way.

Noon after leaving Santa Ana the highways are through a great Spanish grant known as the San Joaquin rancho, but which should not be confused with the famous San Joaquin valley, which runs half the length of the state.

The country is rolling all the way to Capistrano, which is 65 miles from Los Angeles. The running time for this distance by the Stearns was exactly 4 hours, good time, considering the slow speed required in passing through ten towns, most of them having 8 mile speed ordinances.

About 4 miles below Capistrano the bench is reached at the old mission landing and fishing point known as San Juan-by-the-Sea. The bench is followed a few miles, then the road climbs away from the bluffs up into the mountains, first crossing a vast tableland with frequent drops into "box-canyons" and then over a new mountain grade miles long leading down into a buck valley and again back to the coast, across a river that must be forded, and through a tall swamp on to the bench, where almost impossible sand must be gone through. This is at San Onofre, the county line between Orange and San Diego counties.

This sand has never been crossed before by a touring car on its own power, but the Stearns slowly ground its way through and a minute later dived into another bed of sand in the Arroyo de San Onofre and went through that still easier. The fords of San Christians never phased Worthington nor the car he has driven more than 15,000 miles.

The ford of the San Margarita river, with over 2 feet of water and the bottom churned into mud by the hundreds of grazing cattle that were passed which drink there, was discouraging, but down stream a harder bottom was found. The big grade beyond the valley looked to be over 40 per cent, but probably did not average that, although a poor horse passed part

way up the Wire mountains looked and acted as though he could not live another hour. Off these mountains the grade runs down to the old San Luis Rey mission ford, in which several motorists have had to swim ashore and leave cars for hours.

This was avoided by going up stream to the new iron bridge back of the old mission. It was impossible to get gasoline at the store near the mission, but a supply was obtained at Oceanside, causing a quarter of an hour delay there.

Oceanside is 100 miles south of Los Angeles and the speed average all the way, counting only running time, was 20 miles a hour, the elapsed time being 6 hours 21 minutes, in spite of three fords, a dozen towns, herds of cattle and a herd of horses, ranch gates to open and scared teams to pass. Added to those delays was a stop for lunch and delay at San Onofre for the bad sand.

Below Oceanside there is nearly 20 miles of no public road, mere trails to follow, along the Santa Fe railroad track. At one place where the road builders were constructing a turnpike across a salt marsh, the Stearns came to the end of the road and had to slide down an embankment into beach sand, through which she pulled with three of the party pushing.

The Sorrento grade, 3 miles long, and the series of short grades into and out of a half-dozen salt-marsh valleys, were all easy, although some of them had a sand surface several inches thick, and the Del Mar grade is particularly dangerous.

It took nearly 3 hours to get over the 42 miles from Oceanside to this city, Mr. Worthington pulling up in front of the San Diego Cycle & Arms Co. store at 5:55 o'clock.

No repairs were needed, and while Mr. Worthington said the roads south of Capistrano were fierce, they were through a picturesque country, the scenery of which was the most pleasing he had yet seen in all his automobiling. He said he felt more proud than ever of old 871, that being the Cleveland registered number of his car and also its number in Los Angeles.

Careful inspection at a garage showed all parts of the machinery in perfect order, and while it was Mr. Worthington's intention to start on the return trip the next morning, he was not able to get away from this city until 4 in the afternoon, so many wanted to see the car which had made the wonderful run down from Los Angeles.

The return trip was up through the back country, by way of Escondido, Valley Center, Pala, Temecula, Elsinore lake, Temescal canyon, Corona, Pomona, Azusa and Pasadena, 185 miles, which was covered in 15 hours elapsed time, reaching Los Angeles at 7 a. m.

# GETTYSBURG TOUR FIZZLES

**Out of Over Twenty Cars Entered, but Five Start and All Reach Philadelphia, Where the Tour Is Finally Abandoned—Some of the Causes Ascribed for the Fiasco**

New York, May 29—It is apparently up to the Automobile Club of America—some call it the Automobile Club of Fifth Avenue—to do something to retrieve its standing as the leading organization of America in its particular field. The spring run failed utterly and completely, fizzling out at Philadelphia last evening with but four cars and a total of ten people on the ground instead of a score of cars and nearly a hundred people as had been arranged for all along the line by Secretary Butler in his very thorough canvass of the routes last week in a White steamer.

Fifteen members notified the club to arrange for them along the route and arrangements were made. How well the arrangements were made may be judged from the fact that a guide had been secured for May 30 at Gettysburg to escort the large party over the battlefield, every hotel enroute had reserved good rooms, and the A. C. A. through Secretary Butler had issued canvas-backed maps of the course, especially drawn by Arthur Merrick, and cards giving every item of information regarding the course.

In Philadelphia arrangements had been made for park numbers and other numbers had been secured for Pennsylvania. Garage accommodations had been reserved all along the route and special men hired to clean up all of the cars. Gasoline by the barrel and oil also had been stored, and, in fact, every preparation had been made at great expense to make this the banner trip of the club.

The start of the run Thursday morning was purely informal. The members started as they pleased from anywhere, merely notifying the club. They followed the route across Staten island and through New Jersey, and each party drove ahead, expecting to find others enroute as a matter of course, but found none, and in but one instance did two cars come together and that at New Brunswick for lunch at the Mansion house. Altogether it was a dismal affair and the few who reached Philadelphia and put up at the Hotel Flanders were immortalized by the Philadelphia Inquirer as follows under the leading two columns wide and in caps on the first page: "Weep For New York—It's Autists Fail."

Below this was the following: "Those New Yorkers who have adopted the name of the Automobile Club of America for their organization made a complete fizzle yesterday out of an attempted run to Gettysburg. Out of fifty-five announced starters just five landed their automobiles in front of the Hotel Flanders last evening, where the first rendezvous had been appointed. G. Jason Walters, himself an enthusiastic automobilist, had reserved rooms for a throng of eighty leather-coated, bogged record breakers. At midnight he was acting as host for eight of the New Yorkers."

The writer descended to poetry: There were eight automobilists that safely lay In the shelter of the Flanders; But most dropped out of the run today, Like the toad, the Gnome Ganders.

The distance would have been 624 miles and Philadelphia motorists agreed that the New Yorkers must practice a little longer before at-

tempting such a feat over such a distance.

There was apparently no reason for the failure. The day was grand, warm and sunny, and driving in an automobile was an unalloyed pleasure, as it was both cooling and refreshing. The roads were in the grandest possible shape, as may be imagined from the statement that for 70 miles in the Packard with H. B. Joy, Secretary Butler and T. H. Newberry, between New Brunswick and Trenton, the car never struck a thank-you-ma'am and sailed right along at 25 miles an hour without a jog. Such runs in fact were supposed to be in heaven, not in America, and throughout the 100 miles Mr. Joy repeatedly spoke enthusiastically of the delights of such a trip and the pleasures of automobilizing over such delightful roads.

It was, then, not the roads nor the weather, so it must have been something else. The Metropolitan handicap drew 35,000 people and hundreds came in automobiles. Perhaps one of the Philadelphia papers was right when it published what was purported to be a telegram from an A. C. A. man to the effect that he had lost his machine and all his money on Irish Lad and would endeavor to borrow some money and also a machine and come on.

Again there came in the run a Sunday and a holiday, and Mr. Morrell, who had his wife and partner, Mr. Bates, with him, in a Locomobile, said that it might be hard for many men to get away for so long a time and over 2 days so close together without taking their wives. Many ladies do not like motoring so well as do Mrs. Emerson Brooks or Mrs. Morrell, and the wives may have had a little to do with it. Again, the run was scheduled by some one for the closing days of a busy month and the opening days of another month; the members of the A. C. A. intend to take part in the tour to St. Louis and this 8 and the 2 weeks to St. Louis might be a great deal more time than they would care to spend as a vacation away from their business. At any rate, Chairman Brooks expressed it when he said: "We tried a spring run and we know now that so long a run cannot be made successful. The race meets at Philadelphia and Boston drew attention and interest and many stayed away to attend these. We do know, however, that a fall run may be made successful and it is barely possible that in the fall days we may make this very run. The club with its data for this trip has a valuable asset, but that is all that it has for the failure of this run through the failure of the members to interest themselves is bad for the club."

Milo M. Belding, who was another participant, with Charles Meme, rode in the 35-horsepower Peerless car of Mr. Belding, said the club is too large and unwieldy and the interest is not there. "Each individual member feels when one of the six hundred, that his personal absence will not be noted, so he stays away on some slight pretext and others do the same until no one goes. Had the club members have supposed that this run would have fizzled, as it has done, doubtless scores would have made an effort to get out for the glory of the club. It is too late now."

The run accomplished a number of things as

far as it went. The members of the A. C. A. will be aroused by the failure to that point where future runs will be well attended. The run also gave the club the greater right to the title of Automobile Club of America, for not a foreign car took part. There were two Peerless cars, those of Milo M. Belding, with Mr. Meserale aboard, and that of C. G. Wridgway; a Packard, with H. B. Joy and T. H. Newberry and Secretary Butler; a Locomobile, with R. L. Morrell, Mr. Bates and Mrs. Morrell, and a Cadillac, with Emerson Brooks and wife. Mr. Brooks did not arrive at Philadelphia until 2 in the morning, owing to tire and other troubles.

After the arrival at Philadelphia the "eight automobilists who safely lay in the shelter of the Flanders" discussed and discussed the outlook. At the outset Mr. Morrell and Mr. Belding were for going on. Mr. Wridgway and Mr. Joy started only for Philadelphia anyway, and Mr. Brooks looked for more trouble with his car. This morning it was decided to give up the trip entirely and Messrs. Morrell, Belding and Brooks started for Atlantic City to spend Sunday. They will tour home Monday.

The members who made the run were much amused at one incident, and that the crossing of the Camden ferry to Philadelphia. The roads on the New Jersey side are so much better that the bridge at Trenton is never crossed nowadays. At Camden ferry the attendants force the motorists to put out every light, stop his engine and get down and push his car on the boat and then push it off again. Mr. Joy stopped his engine, and after the long trip over he started it again with the switch, much to the surprise of the attendants who simply knew that they had been flim-flammed, as one man put it. Mr. Belding waxed very wrath over having to push his car after putting out all of his big headlights and, turning to the attendant, said: "Shall I also put out my cigarette," whereupon the attendant thought and then said: "It wouldn't be a bad idea."

There are several roads from New York to Philadelphia, but that laid out by the club for the spring tour and followed by the few who did participate will now be the universal road and perhaps the most popular touring road of the country, vying with the famous Boston to Worcester and Worcester to Springfield road for popularity and general excellence. Those tourists who missed the delightful trip will do well to beg, borrow or steal some of the route cards from Secretary Butler in order that they may make the run. In the first place the Staten Island route is followed in order that the Newark meadows and the terrible plank road or turnpike may be avoided. These roads are in horrible shape at present and the car is jolted to pieces in making Newark. The Whitehall street ferry is taken to St. George, Staten Island, in crossing which the towns of Clifton, New Dorp and Tottenville are passed to the Tottenville ferry, which is 20½ miles from the A. C. A. at Fifty-eighth street and Fifth avenue.

The ferry lands the tourist at Perth Amboy, N. J., whence a 6-mile run over good roads takes him to Metuchen and 3½ miles more to New Brunswick, whence the run is started fairly over the Canby pike. No pen in the hands of the most enthusiastic tourist will describe this pike. It is divine, according to the fair ones; heavenly, according to Sec-



tary Butler; a revelation, according to H. H. Joy. Canbury pike is slightly rolling, passes through pretty wood scenes and small towns, and is almost perfectly straight. It extends for 18 miles and the novice might drive at 20 miles an hour along the entire length and chat comfortably with a fair partner without worry regarding the steering.

Through Dayton, Canbury and into Hightstown the pike brings the tourist, and then come a few turns and twists until the turn is finally made into Chambers street Boulevard, another grand piece of road building skirting Trenton for 4 miles to White Horse, where an obscure turn is made at a refreshment booth, whence the run is down hill to Bordentown, which has the only speed ordinance noted by sign boards on the route, 10 miles an hour. From Bordentown it is  $5\frac{1}{2}$  miles to Columbus, and then 7 to Burlington, all the way over just as good roads as the

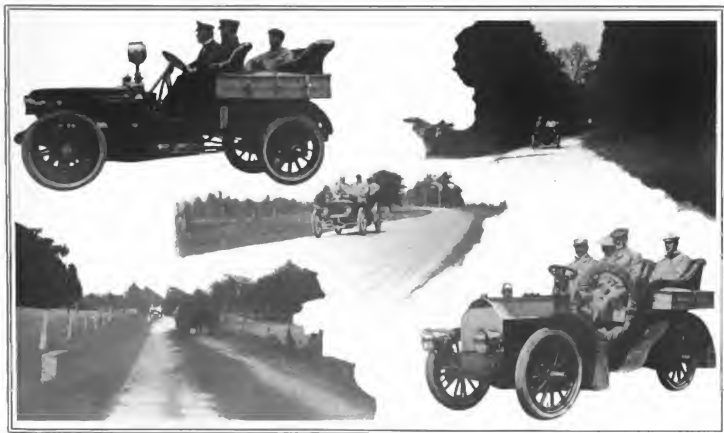
wish to be out in the fresh air during the day. The second room is the largest and is at the same time dining room, drawing room and bed room. A folding bed is placed in each corner and during the day they look like wardrobes. Under the windows there are cupboards. In the center of the room is a combination washstand and dining table. When the sides of this piece of furniture are put down the car will seat eight persons. In the middle of the room on the ceiling is a heavy curtain, which divides the room in two.

#### NOT RESPONSIBLE FOR DOGS

A very interesting case came before a sheriff in Glasgow, Scotland, some time ago. The owner of a dog brought suit for \$50 damages against the driver of a motor car which had run over the dog, causing its death. The sheriff's decision read partly as follows:

The ground of action as laid in the summons

sight of the important fact that the motor also was quite lawfully upon the public road. In my view, the argument is unsound at its base, for the simple reason that a dog is not the kind of property at all to which the principle relied upon is applicable. Of course if the driver of a motor car knocks down a garden wall, or runs into a window of a house by the wayside, the owner of the car will have to answer for the damage, however slowly the car may have been going. But the principle which makes the owner of a moving object liable for damage done to a fixed inanimate object does not apply where one moving object does damage to another moving object. More especially is that principle inapplicable where the injured moving object is such an animal as a dog, which, as in this case, was permitted to gambol all over the roadway. I am, of course, far from saying that it is not the duty of a driver to try to avoid running down animals; but what his duty may be was a question of circumstances. He did not know that this duty had ever been defined, and the circumstances may so vary that no hard-and-fast rule can be promulgated. Probably a rough-and-ready definition may be that when



FEATURES OF THE GREAT DETROIT RUN OF THE AUTOMOBILE CLUB OF AMERICA

Canbury. At Burlington the Burlington-Cananda pike is encountered, leading through Cooperstown, Bridgeborough and direct into Cananda. There is a slightly better road to be found by turning at Bridgeborough towards the river, which is followed to Riverdale, where a turn is made to the main road to the Camden ferry.

#### MOTOR HOUSE THE LATEST

It is becoming quite a la mode in France to manufacture automobiles of the "house" pattern. Only a few months ago, when it was announced that a Russian prince had ordered an automobile which was to have several rooms, it was the talk in motordom. Manufacturers receive a good many inquiries as to prices for such cars. A merchant from Bordeaux, France, recently placed an order for such a machine. It is 24 feet long and  $7\frac{1}{2}$  feet wide, and divided into three rooms. The first is for the mechanic, and is provided with a folding bed and folding seats for the passengers who

is that the car was driven "at an excessive rate of speed or in a negligent or reckless manner." Now, in a question with foot passengers or with other vehicles, the rate of speed is an important element, but in the present connection I don't think it is of material consequence. I think pursuer's agent recognized this, for in argument he did not trust his case entirely to the speed plea, but took up the excited ground that it is the legal principle that any person who has a dangerous machine in a public place accepts liability for injury to persons or property caused by the machine. He argues that his property—to wit, the dog—was lawfully upon the public road, and that it was killed by a dangerous machine—to wit, a motor car—and therefore that the motor car owner must pay damages. This ingenious argument is, I think, in several respects unsound. In the first place, the principle referred to only refers to dangerous articles left unattended in public places, but the motor car in this case was in charge of an experienced driver, and was under control. In the next place, the argument assumes that the mere presence of a motor car on a road is a danger, an assumption which I cannot accept. Besides, the argument loses

a driver seen on the road on the front of him some large, slow-moving animal, such as a cow, for instance, he must calculate its probable movements and try to avoid it by slackening speed, or even by stopping; but that when the animal in front of him is a small and nimble one, such as a dog, whose movements cannot for a moment be relied upon, the driver was justified in holding his course, relying on the nimbleness of the dog to keep clear.

#### HILL CLIMB IN SWITZERLAND

A hill-climbing contest took place near Cologny, Switzerland, last month. The grade was 14 per cent for a distance of  $1\frac{1}{4}$  miles. Sixteen motor cars and thirteen motor cycles took part in the competition. A. Dufaux on a  $1\frac{1}{4}$  horsepower Motosaroché motor bicycle made the best time in the events reserved for these machines by covering the course in 3:30-2.5. H. Kewer on an 18-horsepower Mors won the first prize in the event for cars, going the  $1\frac{1}{4}$  miles in 3:34-4.5.



## CLAIM EXCELLENT SEASON

**Chicago Dealers Say That Cars Have Sold Like Hot Waffles, That Bad Weather Has Had No Effect on Sales, and That Machines Cannot be Secured Fast Enough from the Factories**

Chicago, May 31.—Judging from what the local dealers have to say when interviewed, the automobile business has been very satisfactory thus far this season, and the only strong complaint that is made is that the factories are overrun with orders and that in some cases no cars can be secured immediately, while in some instances it is a difficult matter to catch up on back orders.

The information received was rather unexpected, for while there are a great many automobiles to be seen on the streets of Chicago, and while it is only to be expected that a certain number of sales are continually being made, it was not thought that as many motor cars had been sold this year as would have been the case had not the spring been exceedingly backward, there having been few warm, bright days that would naturally tend to create a desire for automobilizing. In fact, the weather has been so consistently bad in Chicago and vicinity that one would usually think that the local automobile trade has been considerably affected by it. The situation is explained by the dealers themselves below:

"We have not gone after trade," said J. F. Guather, manager of the Chicago Rambler branch. "Our factory is overcrowded with orders, is far behind in deliveries and it would be poor policy to make an effort to overwork it still more. But even so, we have sold a great many machines and are continually showing our sample cars to prospective buyers. I have no doubt that we could sell dozens of cars and get cash in full for them immediately if we had them on hand. Within 2 months, possibly sooner, the people of Kenosha will have caught up and we will be able to promise deliveries within a reasonable time. Just now buyers do get car to wait, and when the good weather has finally made its appearance there will be even less patience. I would not be surprised at a late rush season, but by that time we will probably be in good shape for prompt delivery. The demand for touring cars is greater than for runabouts; it is natural, because in most instances it is the man who never had an automobile before who starts with a runabout, and after being well able to handle it, wants to get a larger and more powerful car."

"Business has been very satisfactory so far," said Manager Hubbard, of the Studebaker Bros. Mfg. Co.'s local branch. "Of course the bad weather has been a drawback, but it has also enabled us to catch up somewhat with our back orders. We sell all the cars we can get, and we can't get them fast enough. There will probably be a rush season just as soon as the weather settles, but it will not have much effect on us because we could not supply the demand anyway. The factory is working almost day and night in order to meet the heavy demand, and it turns out an average of five gasoline and five electric vehicles a day. We have been successful with our gasoline cars, of which we sell as many as of our electric line. I have no doubt that the electric car

trade is suffering on account of too many inferior vehicles being on the market. Were it not for this fact, a great many more would be sold. There is a large demand for small vehicles because there are more people who can pay for such machines than for the larger and more expensive kind. Beginners generally purchase a small automobile, and after having become familiar with its handling want cars of greater power."

Manager Paulson, of the North Side Repository, agent for the Pierce, was not in when the MOTOR AGE man called, but his assistant spoke as follows: "We expect a great rush later on, but will not be in a position to take care of the orders. We have been writing and wiring for cars right along, but to very little avail. The factory is working to its utmost capacity to fill the many back orders which have been coming in ever since the shows. The bad weather has affected sales, and business was slow for many weeks, but it could not be much better now. We regret only one thing and that is the lack of cars on hand. The demand for the larger and more powerful machines is remarkable compared to last year, and everything seems to indicate that the demand for them will steadily increase. Although we are not located anywhere near the 'automobile row,' people come to see us; this simply means that it is not absolutely necessary to be in a bunch to do business. It is no more a one-sided business, and a great many buyers get well acquainted with several different makes before they place their orders."

"The bad weather has helped us a good deal," was said at the Locomobile branch. "We simply would not have been able to promise any date for delivery had it not been for the weather. We have done a nice business and are well satisfied so far. There is no doubt that there will be a big rush from now on, and we are ready for it, for we have a supply of cars on hand and can get them from the factory without delay. The demand for the large touring cars has been remarkable. It shows that there are plenty of people who can afford to pay the price, and furthermore that they are well posted and know of the advantages of a larger car."

"We could not supply the demand in case of any kind of rush season," was the story at the store of the local Oldsmobile company. "We have only received about one-tenth of the number of cars which we are to get, and, although we are trying every way possible to get the factory to send us more machines, we do not receive sufficient to meet the demand. We expect twenty this week and as many next week, but most of them will be delivered at once, being back orders, some of them very old indeed. We know that there was such a thing as bad weather. We felt it on our person, but not on our trade. People come and are coming right along, whether it rains, snows or freezes, and consequently we have no kick coming."

"I would like to find a few willing, strong-minded, strong-armed men," said William

Deinfontaine, of Pardee & Co. "I would go with them to some of those factories, and get out all the cars we could find 'laying' around. Twenty-five would not be any too many, as I am sure they would be sold within a fortnight. We are satisfied with the business we have had so far this year and have only the one kick coming, that we cannot meet the demand. The manufacturers of the several different makes which we represent tell us the same story: 'We are sending you all we can and as fast as we can, but don't forget that there are other towns in the states where the conditions are similar.' We regret the bad weather we have had for one reason, it prevented us from making any demonstrations as satisfactorily as they could have been made under normal conditions. This does not mean, however, that we did not sell. I took out a man a few days ago in a large touring car, and while it rained and the wind blew at 50 miles an hour, after 3 hours of testing over all kinds of slippery, muddy roads, I sold him the car. The tendency of buyers is altogether for the more powerful touring cars. It is also noticeable that people begin to forget that there is such a thing as season in the automobile trade. They buy when they are ready for it, no matter what time of the year it may be."

"There can be no doubt that the bad weather which has been ours for the last 6 or 7 weeks has caused sales to be rather slow," was said at the store of the Greer Motor Car Co. "We have had numerous callers and have done well, but it is quite natural that people should prefer to buy when demonstrations are more pleasant. On the other hand, successful demonstrations under bad weather conditions are a decided factor in favor of a car and many purchases have been the direct result of such tests. There is a great demand for light cars costing under \$1,000. Buyers of such machines are mostly beginners who often state that they simply want this kind of car with which to learn and that they would soon get a larger and more powerful machine. In case of a rush season we are well prepared to meet the demand."

Manager Fry, of the Apperson Bros. local branch, said: "If it had not been on account of the bad weather we would not have been able to catch up with our back orders. As a matter of fact, we are not yet up to date and probably will not be for several months. While this applies to almost all of our different kinds of machines it is especially true regarding our 25-horsepower cars, which are selling as fast as if they were merely \$500 automobiles. The majority of buyers of large touring cars don't care very much about the very high powered machines, but wish a car that seats five people and is of reasonable power. We are selling quite a few of 40, 45 and 60-horsepower cars, but there are very few people who inquire for the more powerful cars."

"We cannot complain," said Mr. Hayden, of the Hayden Automobile Co. "We have done well thus far, and while we know that there has been some real bad weather, it has not affected us. We have had many prospective buyers all season and always having a good supply of cars on hand filled orders promptly. Should there be any into rush we feel confident that we can meet the requirements."

"As far as we are concerned we have done very well since the season opened, and if the bad weather has affected the sales, as some might claim, we certainly did not notice it. We have been selling right along, and our store has been visited daily by a great many prospective buyers, whether it rained or shined. It seems that the people who are in the market for an automobile don't mind the weather at all." Thus spoke one of the salesmen at Ralph Temple's new store. "A feature of the season has been the great demand for light touring cars and the comparatively small demand for runabouts; prospective motorists are also most interested in cars of medium horsepower. Should there be any kind of rush season we are fully prepared to meet the demand. We have a very large stock of different kinds of machines on hand and can get some from the factory in a short time."

"Bad weather and poor sales don't always go well together," said Charles P. Root, Chicago agent for the St. Louis cars. The agent who handles a good line is generally able to sell, notwithstanding bad weather. I am well satisfied with the amount of business I have transacted so far this season, except that I can't get all the cars I need. The factory is simply overran with orders and is doing its utmost to catch up. I expect a car load this week, which will cause some relief. Generally speaking buyers want touring vehicles nowadays, and don't take so much interest in runabouts. Dealers are mostly interested in the latter, as for business purposes they are easier to handle."

James Levy, manager of the automobile department of the Mead Cycle Co., said: "Sales have been good all season and the bad weather does not seem to have affected us. There was a time when the buying people waited until it became warm, but within the last year a decided change has taken place, and people buy when they are ready, without paying attention to spring or summer. Why should they? I don't think there will be a late rush season simply because of the above fact. Our store is much visited by prospective customers, and inasmuch as we have a large supply of all kinds of motor cars on hand there is little trouble in effecting sales. We probably receive more calls from out-of-town buyers than anybody else in Chicago, and it is notice-able that the country people are getting well acquainted with matters connected with the automobile trade. They are learning a good deal, show great interest in the details and listen with pleasure to any talk that may result in acquiring some knowledge."

"We have had a fine business season thus far, and do not feel worried concerning a possible rush season within the next month or so, simply because we could not then supply the demand," said one of the salesmen in Frank P. Hilsley's store, where the Peerless cars are handled. "Of course we are not happy over it, but the factory is far behind in filling orders, and we could not get any cars, beyond those which we will receive as originally scheduled, even if we would offer a premium. There has been a surprisingly small demand for small cars, but it is somewhat natural. The people realize that the larger cars give better service all around and are not as expensive to keep as at first thought."

"People buy when they feel like it," was said at Orlando Weber's store, where the Popo-Toledo, Pope-Hartford and Pope-Tribune cars

are handled. "Formerly people intending to purchase an automobile waited because it was more or less the fashion for all to buy about the same time. Now they are afraid that if they wait too long they might get left, and for this reason sales are made whether it's early spring or late summer. There is little doubt in my mind that the weather during the past month has helped, rather than harmed, because it has enabled our factory to get into better shape by catching up somewhat on back orders. At present seven big cars are turned out a day, and we are getting into shape to meet the heavy demand. For a while we refused orders, it being the only means to relieve the embarrassing situation. Only about forty out of seventy cars sold have been delivered, but the factory is sending as car loads right along. There will probably be a rush within a short time and we will be able to supply the demand if it is not too heavy."

"This has been a great season so far," was declared at the local branch of the Electric Vehicle Co. "We are very much pleased with the sales we have made, and cannot really say that the bad weather has had any effect on our trade. Our only genuine complaint is the insufficiency of cars on hand and inability of the factory to turn out enough machines to fill orders. The sale of electric machines has been unusually large this season, especially among ladies. Our big touring cars have been sold to so many people that we are still antedated at the success, but the trouble is the same as with our electric vehicles—we cannot get enough of them; in fact, we cannot make any kind of promise of delivery to the buyer."

At the local agency for the Ford and Royal cars, Manager Zimmerman said: "We could dispose of a great many more cars than the number we are able to secure from the factories. The conditions in Chicago do not seem to be exclusive, because in other cities the dealers cannot get the supply they need, and it seems that it will be so all season. We are very behind in our deliveries, although we are getting two car loads a week. The sale of small touring cars is very good, and there are more inquiries for this style than for the large touring cars. The reason for this is that the city people have begun to realize that the smaller cars are much more handy and easier to get around with in the city. A rush season is quite possible and we would probably be in good shape to meet a sudden excessive demand if such a rush does not occur too soon."

"This has been an extraordinarily good season," said A. C. Banker, agent for the Antocars and the Walter. "Bad weather affects the trade in some way or another, but sometimes it is entirely welcome. Personally I have no hard words against its occurrence this year because it has enabled manufacturers to catch up in a reasonable way with the many orders placed shortly after the shows. If I had this store filled closely with cars, and if I would announce the fact, I think there would not be a single one left within 10 days. Chicago has a great many more people who have the means to purchase automobiles than is generally thought, and selling one is not any more considered a wonderful thing. It used to be the talk of the town, like it is now in a village. I expect an end-of-season rush and will be fully prepared for it, yet I don't think that the rush will be what it used to be, because people realize that it is not necessary to wait until a certain moment in the year to purchase. The tendency of buy-

ers is towards the tonneau car, something that costs from \$1,000 to \$1,500; it is no more the two-passenger vehicle that is sought, but one in which four or more persons can be comfortably seated."

J. R. Bensley, of the Western Automobile Co., agent for the Fredonin and Decanville cars, said: "Trade has been fair so far, but the bad weather has had much to do in holding back many people, from even looking at cars. There is not much pleasure in riding in an automobile when it is cold and rainy, as it has been for many weeks, and consequently sales have been somewhat slow. It looks as if there is going to be a rush for cars in the near future, and the only trouble in connection with it will be to get the cars from the factory. Since the show, when orders began to come in fast, the factories have been working hard to avoid being overrun, but to no avail and it will be quite awhile before they can catch up. A feature of the season has been the demand for the better kind of cars. People are willing to spend the money for a good automobile and especially for touring cars seating at least four people."

"We have sold a great many more cars than we ever anticipated," said Manager L. J. Ollier, of the Cadillac Co. of Illinois, "and if the exact figures were published it would simply amaze people. The weather has been really bad, but it does not seem to have affected our sales, for we have been busy ever since the show. I don't believe that there will be a rush season, but the trade will continue to be brisk until late in the fall. It seems to me that people are giving up the idea of buying at a certain specified time of the year. When they get ready to buy they have not in view whether it is early or late, but only whether they will be able to get the cars. We are, however, getting machines right along and notwithstanding the recent big fire in our Detroit plant; deliveries are good, and there is no reason for complaint because it must also be taken into consideration that there are other agents in the country to be supplied."

Henry J. Ullman, local agent for the White steamer, said: "There can be no doubt that the bad weather has caused sales to be slow during the past month or two. People do not want to buy when it is cold and inclement, and even if they buy they don't want the cars delivered until it becomes warmer. I have two cars here in the store which were ordered about a month ago and are not to be delivered until the end of June. The people who purchased them stated plainly that they would not buy unless they could have the cars held until the weather became good. I expect a big rush shortly and am afraid that I will not have all the cars on hand that I could dispose of. Although the factory turns out about thirty-five cars a week there are still a great many back orders on file and thus it is difficult to get stock."

One of the salesmen in the store of the Woods Motor Vehicle Co., said: "Bad weather certainly has had no bearing on us, as we have been busy filling orders for months. The trouble is that we cannot turn out our electric vehicles fast enough. In case of a rush season we would find it difficult to meet the demand."

At the Automobile Exchange, which handles the Michigan, Imperial and Chicago cars, it was said that trade had been fair, but that the weather had certainly been the cause of many people waiting to buy until it had become warmer. "It is quite natural, because there is not much enjoyment in automobiling under such weather conditions as we have had."

## DANGER IN MOUNTAINS

### Automobile Tourists in Southern California Meet with Disaster on San Marcus Grade

Los Angeles, Cal., May 28—Out here in California there are mountains on all sides, so that every long run means some mountain climbing that will try any automobile. In southern California there are several grades that are not undertaken a second time by most motorists, even if they get over one of them on the first introduction. One of these is the one above the old Pala mission ruins, leaving the fruitful valley of the San Luis Rey river, where there is now an Indian village of importance. This grade averages close to 30 per cent, at times is nearer 40 per cent, and there are a number of snakes of automobiles in use that will not climb it. Most cars have to take it in jumps, often times only making 10 feet at a pull, but those who know of it in advance go around some other way, as back of Pala grade is steady mountain work for 30 miles. So far there has been no serious accident on this grade, although the roadbed is only wide enough for one car, and a team could not be passed, and to make it more exciting at places there is a sheer drop of hundreds of feet.

Late last month Al Worthington passed over this awful grade at night in his Stearns, and had his front wheels skid on a soft part of the grade, which had lately been rebuilt. Fortunately the Stearns touring car has good reliable brakes, as the distance at this point, from the roadbed to the Mexican rancher's garden below, is over 500 feet, with nothing to break the fall. Mr. Worthington and two of his guests, W. C. Schroeder of Cleveland and Will Harrington of Los Angeles, insisted that the distance was at least a half mile—and it did look like that in the pale moonlight.

The outside rear wheel of the big car took the deep track that had been cut by the front wheel and the Stearns hung on the edge of the grade balanced on its chain and differential. A foot farther and the car with at least three of its passengers would have met a sad fate.

With shovel and pick and the aid of the Mexican, who climbed up the side of the mountain to investigate the four headlights, got the big car into the road again in 70 minutes of furious work. When Worthington carefully climbed out of his Stearns and got his feet on solid earth, he expected every moment until the inside wheels had been anchored in pits 2 feet deep that his car would go rolling down the mountain side like a great log. And he would have sold the car at that time for a song.

On Sunday, May 15, Andrew N. Jung of this city was not so fortunate as Mr. Worthington and his friends. Mr. Jung is an experienced automobilist, who piloted his Winton over all the grades of Yosemite valley last year and who has owned and operated automobiles for 5 years. He was on his way to San Francisco in his new four-cylinder Peerless touring car and was crossing the dangerous San Marcus pass, north of Santa Barbara, when the brake of the Peerless gave away. Mr. Jung was accompanied by his wife and a young man named Miller. A Torrian, owned and driven by Architect Hudson of this city, and a Cadillac, owned by Tom Vigus, which were accompanying Jung, had crossed over the grade and were waiting for the Peerless.

When the brakes broke the car shot ahead so quickly that there was not time to throw in the reverse and the big car was rammed into the bank so suddenly that it overturned, pinning Mr. Jung down, where he was held until help arrived. Mrs. Jung was thrown against a tree and was unconscious for hours. Young Miller was entangled some distance, but not injured so badly but that he could go for help. When he reached Hudson and Vigus and their families, who had become worried and were starting up the mountain to investigate, Miller fainted. On reaching the wreck Miller fainted again.

The Peerless was partly raised and Mr. Jung was removed from his painful position. The Jungs were taken to a bee ranch nearby and medical attendance was brought from the nearest town, but it was found necessary to go to Santa Ynez for horses to pull the Peerless out of the bank, as twenty-five men were unable to move it.

Mr. and Mrs. Jung have been brought to their home in this city and will probably recover, although they are still very low. Young Miller was not injured seriously.

Santa Barbara county, whose south line is about a hundred miles north of this city, passed a county ordinance a year ago making it unlawful for motor vehicles of any kind to travel over San Marcus grade, also on one other grade near Santa Barbara city. Jung and his friends knew of this law, but refused to recognize it. This ordinance is probably illegal, but most motorists have gone around by Gaviota pass instead.

With the many mountain climbs in California it is a wonder that more automobile accidents do not occur. No doubt the scarcity of these accidents can be attributed to the good brakes on most of the big cars used out here.

### FOR AMERICANS ONLY

New York, June 1—The Vanderbilt cup race conditions were determined in a general way yesterday at a conference of Chairman Pardon, of the A. A. A. racing board; W. K. Vanderbilt, Jr., and William Wallace, of Boston. The decision as to the character of the race was formally withheld, but Chairman Pardon's conversation with the Motor Age man, and other indications justify hazarding the guess that for several years, at least, the race will be restricted to American machines.

It may eventually be thrown open to the world. In the meantime it will give Americans a chance to gain experience in long distance racing and building of automobiles for such sport.

The minor details of the race and the rules are now being worked out and there is to be a meeting of Mr. Vanderbilt and the racing board in Boston, Saturday. If this should by any chance not occur the meeting will then be held in New York on Monday. After this meeting a formal announcement of the rules of the race will be made.

### PROMISES SEPTEMBER MEET

New York, May 30—Alfred Reeves, secretary of the Empire City track, says although he and President Butler have been too busy with preparations for the great trotting meets at Yonkers and Brighton in August to discuss the matter, he deems an automobile meet at the Empire City track in September a fairly well assured fixture.

## BIG COMMERCIAL SCHEME

### Pittsburg Company To Run Passenger and Freight Service Automobiles in All Directions

Pittsburg, Pa., April 28—The Auto Traffic Co., of Pittsburg, will erect a \$500,000 stable to show the public that it means business. Plans for the building have been drawn by Architect Gilchrist and work on the structure will be started early in June. It will be located at Craig street and Grant boulevard, one of the most central locations in the city and one that commands a splendid view of the East Liberty valley and Scheley park and Carnegie institute on the south.

The building will be a four-story steel frame structure, 190 by 100 feet in dimensions. The peculiar topography of the ground admits of three floors being entered at street grade, a great advantage to the company in saving time and power. No elevators or stairways will be needed. The building will be little exposed to fire risks, as it is bounded on three sides by streets. It will be strictly fireproof and furnished with automatic sprinklers. An individual water supply will be obtained from artesian wells and a private light and power plant will be installed. On the first floor, entered at grade from Craig street, will be the smith shop and power plant. The second floor, also entered at grade from Craig street, will house the general machine and repair shop. A general vehicle storage room will be on the third floor, which is entered from Grant boulevard. Fuel will be stored in the basement.

Passenger, express and other vehicles will be housed separately and half deck or storage will be provided for duplicate bodies and served by overhead conveyors. The fourth floor will have the main offices and the wood repair and paint shops. The men's quarters will also be on this floor. In addition to lockers there will be provided reading and exercise rooms, a quick lunch counter and dormitories for late crews. The remainder of the roof floor furnished in roof garden style will be for surplus storage and will be protected by a deck roof or awning. The building will have 20,000 square feet of space and will house 200 vehicles.

Since the organization of the Auto Traffic Co. by S. J. MacFarren, of the east end, over \$20,000 of the \$200,000 capital has been subscribed. The movement for automobile buses was entered by the east end board of trade in July, 1903, and many of its members are taking an active interest in the new organization. A handsome suite of offices has been fitted up in the Liberty National Bank building.

The total initial mileage as planned will be 35 miles and it is proposed to operate forty vehicles at the start. Fifteen of these will be for passenger and twenty-five for express service. Later on it is expected to install a complete freight service. The Etna-Glenahaw line on the Butler plank road will be the first one opened. This will be started in July on a 20 minutes schedule. The next two routes on the local schedule are the east end cross-town route and the shoppers' route, running from the north side to the various railway stations down town and on the south side. The present buses of the company seat sixteen persons. Ten more passenger buses will seat forty persons each, have double engines of 20 horsepower each and a speed capacity of 20 miles an hour. The crews will be selected with care from ex-

perienced motormen and these men will be given a thorough course in automobile management.

The company proposes to give express service to the city without breaking bulk. Twelve buses will be run 18 hours a day each. It is estimated that these will earn \$324 a day each. The total estimated earnings are \$82,000 a year, after deducting 50 per cent for operating expenses. This is at the rate of \$4,000 a mile or 40 per cent on the initial capital.

#### ROAD EXPERTS INSPECTING

Washington, D. C., May 28—In company with Martin Dodge, the good roads expert of the agricultural department, and Captain Bench, the engineer commissioner of the District of Columbia, the members of the Massachusetts highway commission, consisting of W. E. McClintock, A. B. Fletcher and Harold Parker, recently made a tour of inspection of the streets and roads in and around Washington. The commission, which has full control of automobile licenses and other matters in the Bay state, is on a tour of inspection throughout the country, the national capital being included in the itinerary. Through the courtesy of Manager Hough, of the local Pope branch, the members of the commission and their two guides were furnished with two big Pope-Tolledo cars, by means of which they were enabled to get a good idea of the street and road improvements in the District of Columbia. The party went over the speedway, which they pronounced fine, were taken through Rock Creek park, out the Conduit road, and over various other roads leading out of the capital. While they were much impressed with the excellent streets in the city, the members of the commission were a unit in declaring that most of the roads leading out of the city were anything but a credit to the capital of the nation. This fact will be brought to the attention of congress next winter.

#### RHODE ISLAND MOTORISTS REGISTER

Providence, R. I., May 28—This little state, with its windy roads and its rather flat country, so uninteresting to the tourist, proves to be very much of an automobile state, according to the records at the office of the secretary of state, where are distributed the registration certificates for cars, as ordered by the new law. By the first of June every machine within the confines of "little Rhodey" is supposed to be registered, and up to the present time there are over 400 recorded on the books. Ever since the bill was passed which compelled the licensing of machines, the owners have been presenting their applications, and now as the time limit draws near, the applications are coming in faster than ever. There are forty motor cycles on the list so far, and ten different dealers have taken out the \$10 certificates.

This state does not supply the tags, as is done in Massachusetts, and an enterprising young man has taken the task of supplying them to all of the men with certificates. Up to the present time these tags have not arrived from the manufacturer, to the great inconvenience of automobilists. Those who have taken out certificates, when riding into Massachusetts, have been stopped on numberless occasions, and have had to slowly unfold their certificates for the benefit of country constables, simply because there were no tags in sight. One man in going from this city to Boston, a distance of a little over 40 miles, was stopped three times for this reason.

## COAST IS SHY ON CARS

### San Francisco Trade Surprises the Dealers Who are Caught Short Handed—Trade News

San Francisco, Cal., May 28—The increase in the use of automobiles in this state is remarkable when compared to last year's great showing over the previous season. Of course it is to be expected that there will be a great number of users of motor cars every year, but this increase is so tremendously large and unexpected that the dealers underestimated the number of cars they thought they would be able to dispose of. Hence there is a shortage of cars here.

A new company for the sale of automobiles has just been formed in Fresno and the demand in that section is much heavier than last year, when from seventy-five to eighty cars were sold. In San Jose 50 miles from here, one agent has already sold twenty-six cars this season and a few days ago he gave a local house an order for sixteen, all of one make.

Here in Frisco the dealers are receiving car load lots weekly but after a few days after a shipment is received there are generally but one or two cars left on hand. A great many agents, while getting what may generally be thought to be fair deliveries, are complaining that they cannot supply the demand. In the venting business every one seems to do well; one concern has doubled its business within a month.

The California Auto Express Co., which was organized to do a general automobile business and which will introduce the Fischer system here, will establish a general freight service, in connection with which will be operated a passenger service from the Ferry building to several points on Market and other streets. The cars of this service will be of the style of the London General Omnibus Co. The company will also operate a stable, and will have the agency for several cars. The manager of the concern has made several trips to the east for the purpose of studying existing conditions in the great merchant centers and from these trips and with the added experience of the best of the eastern managers of similar concerns, a comprehensive system has been evolved.

The management of the Hotel Vendome, San Jose, has issued an automobile road map of Santa Clara county, which automobilists are finding very convenient. The Vendome, which has a large and well equipped garage, is the headquarters for tourists visiting the Lick observatory. The map shows the routes from this city with all the principal points of interest by the way. The run from here to San Jose can be made comfortably in 2½ hours.

Walter Hansel, of the Stockton Automobile Co., and two of his friends, a few days ago made a run from Stockton to Oakland in the former's 1902 Oldsmobile in 6 hours, including time for breakfast and short stops en route. This constitutes the best time made as yet between these two localities. While in this city Mr. Hansel placed an additional order with the Pioneer Automobile Co. for eight Oldsmobile runabouts and six touring cars.

C. L. Ray, of Seattle, Wash., and his chauffeur, started from Tiguano, Mex., May 8 in a Winton touring car, en route to Seattle. They are making the trip by easy stages and have already spent 3 days in Los Angeles and 2 in San Jose. They reached here last Friday after having covered 1,135 miles without trouble.

L. R. Mead, of Byron Hot Springs, has agreed to get out an automobile map and guide book of the Contra Costa section. It will undoubtedly be found a valuable addition to data for local owners and drivers, as there is not yet any complete map of the section.

A motor cycle and bicycle meet will be held in this city June 5. There will also be a 5-mile race for motor cars for which a valuable trophy is offered.

#### SHATTUCK GOOD ROAD WORKER

New York, May 30—Albert R. Shattuck, former president of the A. C. A., is devoting his enthusiasm to good road work, which he finds much more to his taste than scrapping with legislators over speed ordinances. Besides giving up much of his time to the furtherance of the bills now pending in congress for big national appropriations for trunk highways, he is doing much excellent missionary work for local road improvement. The municipal powers that be having paid small attention to newspaper stories and A. C. A. committee letters as to the need of highway repair in many parts of the city, Mr. Shattuck drove Frank Pendleton, chairman of the commission for the improvement of the city, and Jacob A. Cantor, chairman of the sub-commission on highways and parks, over some of the city's fine suburban roads and then took them over some of the ill-conditioned up-town boulevards of the city itself to show the contrasts and the needs. Such practical demonstration to road officials is worthy of imitation elsewhere.

#### MOTOR CYCLISTS PLAN BIG TIME

New York, May 30—The annual motor bicycle endurance run will be promoted this year by the National Federation of American Motorcyclists. The contest proper will cover a period of 6 days, as follows:

July 2—New York to Albany, following the east shore of the Hudson river.

July 3—Albany to New York, following the west shore of the Hudson.

July 4—One hundred miles paced regularly run.

July 5—Tests in New York city, comprising hill-climbing trials and starting, stopping and slow-speed trials.

July 6—New York to Wilmington, Del., by way of New Brunswick and Trenton, N. J., and Philadelphia, Pa.

July 7—Wilmington, Del., to Cambridge, Md., where the annual meet of the F. A. M. occurs July 8 and 9.

The touring section destined for Cambridge will leave New York at noon July 5, under the direction of Dr. F. A. Roy.

There will be three classes of awards, for respectively, those who participate in the events of July 2, 3, 4 and 5, for those who participate in the events of July 5, 6 and 7, and for those who take in the entire programme. Only the latter class will be eligible for the grand prize, a diamond medal. The entry fee for all save the diamond medal class will be \$3; for the latter class, \$5. Entries will close June 25 with Will B. Pittman, chairman, 243 West Forty-fifth street, New York.

At Cambridge will occur the annual election, also the annual jollification. The latter will include an afternoon of track events and a smoker and a number of runs and excursions. The Maryland city is surrounded by splendid shell roads and being located on the Chesapeake bay, and in the center of an oyster, soft shell crab and fruit district, readily lends itself to the good time that is in preparation.

## FORD'S IMMENSE PLANT

### Structure To Be Ten Times the Capacity of Present Plant and To Be Modern Throughout

Detroit, Mich., May 28—Ten times its present size—that is what the new Ford automobile factory is to be. Work has just been started on the new plant, and already the walls are beginning to show above ground. A big force of men is at work and the company proposes to move into its new plant early in September. The new plant is calculated to remove the congestion of the present quarters, which are too limited even to fill the orders now present on hand, among others being one from St. Petersburg for forty-one machines.

Some idea of the plant, which is to cover an entire block at the corners of Beaubien, Piquette and Brush streets and the railroad, in the northeastern part of the city, may be gained from the general dimensions of the main building. This big structure will be 402 feet long, with a width of 56 feet and will be three stories in height. As added fire protection, each floor will be divided into four by fire walls, and each division will be provided amply with fire escapes, so that there will be no danger of loss of life from fire, such as was narrowly averted at the big Cadillac fire here 2 months ago, when more than fifty persons, including several women, were forced to jump from the windows, some of them being injured, though escaping with their lives.

The offices, which will be spacious, will occupy the corner at Beaubien and Piquette streets, back of which will be a large stock room. In the second division of the building will be the employees' entrances, dressing rooms, toilet and locker rooms, elevators, stairways to all the floors, and erecting room. Beyond is the repair shop, next the shipping room with large stairways and freight elevators.

On the second floor will be Mr. Ford's experimental rooms, the designing and drafting departments, and storing rooms for the bodies and tonneaus. The finishing departments will be on the third floor, including the painting, varnishing, rubbing, trimming, coloring, and wheel rooms. The tanks for filling motor tanks will be located underground outside the building.

The entire building will be of semi-mill construction, with fire walls, and double fire doors between the various sections of the building. Automatic sprinklers will be installed on every floor and a 25,000 gallon tank and a reservoir, which, together will hold nearly 100,000 gallons of water, will furnish the fire protection needed. Connections will also be provided so that fire engines may connect with these reservoirs, because the Cadillac Automobile Co.'s big fire proved conclusively that Detroit is sadly in need of reservoirs in one of its most flourishing manufacturing districts.

### PARIS SURPRISED

Paris, France, May 20—Paris is wild with excitement. One would think it is the night of an election day. The newboys are doing a tremendous business selling extras and although the information contained therein concerning the international cup eliminating race which ended only a few hours ago, the engorgement with which the people are buying the journals is a good evidence of the general interest with which it watched this race.

It was first told that Thery won by a large margin and that Salleron and Rougier will form, with him, the French team, unless otherwise decided by the sports committee. The people are surprised at the result. Of course, now that it is all over, there is a lot of "I told you so" fellows, but it is nevertheless the truth that not one out of ten followers of the racing game would have predicted that the lightest car and the one with the least horsepower would make a runaway race of the trial.

The result speaks for itself. It will no doubt have a marked effect upon the construction of racing machines for road events. It seems to have been proven that the lighter cars have the advantage over monster cars when it comes to sharp curves, steep hills and quick starting. Except for an accident entirely independent of the car itself, Caillois, also of the Georges Richard-Brazier stable, would have easily managed to get in the team with Thery, for although he was sixth of the ten who finished the course, he gained much time after his accident over competitors driving 100 and 110-horsepower cars. His car as well as that of the winner was an 85-horsepower machine weighing 2,135 pounds, which is from 30 to 60 pounds lighter than most of the other cars which were in the race.

To say that the unexpected victory of the Richard-Brazier car was met with an ovation such as that when manufacturers like Renault, Mors or Peugeot won big races, would be lying, because there was much disappointment in not seeing the "old brigade" or the Gobron-Brille in the front. Among fair-minded motorists, the opinion tonight is that the best have won first honors and they place their confidence in their ability to show the others the way in the final game, the race for the Bennett trophy.

On the other hand, there is unanimous satisfaction that the hard race of today went through without accident to spectators or performers. The organization was perfect and the immense crowd of onlookers was so well behaved that at no time was it necessary for either the military guards or the local officers to interfere. Credit for this condition must be given in a large measure to the press, which spared no space in warning the people to keep out of the road and in making them understand that should there be any serious accidents, it would mean official ban on automobile races in France.

### GOOD ENDURANCE TEST

New York, May 30—On the first day of the A. C. A.'s abortive spring tour, Charles G. Wridgway, manager of Banker Bros. Co.'s branch in this city, made a rather creditable run to Philadelphia and back in a 24-horsepower Peerless. He had with him as passengers his wife, son and two friends. The party left the automobile club at 7:20 in the morning, and made the journey by way of Staten Island, New Brunswick and Camden. Despite a ferryboat delay of over an hour at Totenville, Mr. Wridgway got to Philadelphia at 2:15 p. m. The afternoon was spent in driving around the Quaker City and the start on the return trip was not made until 5:45 p. m. Stopping at New Brunswick for supper they got to St. George at 12:20 a. m. Here another long wait for a ferry boat delayed them so that they did not reach the Banker garage until 2:15 a. m. Mr. Wridgway says he used but 19½ gallons of gasoline on the 204 miles of round journey, not counting some 20 miles or more covered in Philadelphia.

## COLUMBUS A BUSY CITY

### Now Known as the Home of the Air-Cooled Machine, with Still More To Come

Columbus, O., May 28—Columbus is likely to become the home of air-cooled cars, if she keeps up her present record. At this time three different concerns are manufacturing air-cooled machines, and it looks as if others would start into the business before long. An innovation in Columbus is the surrey body. Governor Herick owns a machine of this pattern and one is now about to be completed for Julius F. Stone, a prominent coal man. It is also said that the Stearns machine will shortly appear in this style.

Rodgers & Co. are the first Columbus manufacturers to make a surrey. They have two cars now almost completed. As a result they have planned to go into that line on an extensive scale. The machines are fitted with air-cooled motors manufactured by the Buckeye Motor Co. The machinery is all placed under the hood in front, as in the runabout. It has propeller shaft, the same as the older machines. The body is low down and easily entered. It is probable that a four-cylinder air-cooled machine will be put on the market within the next few months to be known as the Imperial.

The Columbus Motor Vehicle Co.'s business is up to the capacity of the plant this year. The factory is located in the south end, at the corner of Third street and City Park avenue.

The Eclipse Machine Co. is now perfecting an air-cooled engine that gives promise. Several machines will be equipped shortly and will be given a thorough trial. This company has just completed a new garage in the south end and all space has already been taken. It is 50 feet long and two stories high.

One of the finest garages in the city is operated by the Oscar Lear Automobile Co. at the corner of Fourth and Gay streets. It consists of a basement and three floors. The basement is used for washing and cleaning. The storage and salesroom takes up the ground floor. The second floor has a finely-equipped repair shop, where all ordinary repairs are made. The third floor is occupied by a machine shop for manufacturing purposes. Within a short time it is probable that an electrical generating plant will be installed in the basement for charging, lighting and power purposes. The company handles the Winton, Peerless, Cadillac, Packard and Waverley. Mr. Lear sold his bicycle and athletic goods store some time ago and is now giving his exclusive attention to the automobile business.

The Frisbie Motor Carriage Co. and Thomas E. Curtin have a handsome little garage on Long street. The Frisbie company takes care of the sales of the Dumont, manufactured by the Columbus Motor Vehicle Co., while Mr. Curtin is the agent for the Autocar and the Haynes-Apperson machines. The Midget Tubular Steel wheel Co. is running full with all the business it can take care of.

### NOW THE DOCTOR'S TURN

Washington, D. C., May 28—An echo of the memorable automobile ride taken March 16 last by Dr. S. DeLancy Hicks, as related at the time in Motor Age, was heard this week when Hicks instituted suit against the Pope Mfg. Co. to recover \$25,000 damages, alleged to have been sustained by him by reason of

the alleged negligence of the company in failing to return him to this city after taking him out riding in one of its automobiles. In his bill of complaint Hicks alleges that, being desirous of purchasing an automobile and having inspected some of the machines sold by the Pope Mfg. Co., he was invited by W. J. Foss, former manager of the local Pope branch, to ride in a Pope-Toledo in order that its merits might be demonstrated to him in a practical way. He accepted this invitation, he recites, and was taken out in the automobile to a secluded spot 24 miles from Washington and left there, and that he being without money was obliged to walk home through the mud and rain, whereby he suffered damages to the extent of \$25,000. This is the second suit the redoubtable doctor has filed as a result of that ride, the first being against a local newspaper for publishing a story of the ride, in which the doctor was held up to public scorn. It is understood he has in mind the bringing of suit against several other parties who were participants in the joke played upon Hicks. The damage suits already filed are not taken seriously here, as it is believed Hicks has not sufficient cause for damages.

#### RECENT INCORPORATIONS

Portland, Me.—The Automotor Co., capital \$200,000. Nothing paid in; par value \$100. To deal in motor vehicles. Promoters: Thornton Parker, Boston, president and treasurer; George P. Gould and M. G. Bradford, Portland.

New York.—Rensil Automobile Co., capital \$1,000. Directors, C. W. Lisner, H. I. Toplitz and H. J. Richardson.

St. Louis, Mo.—Mound City Automobile Co., capital stock \$10,000, half paid in. To manufacture and deal in automobiles. Wilkinson C. Morse, Chillicothe, Ill.; Edward W. Bissell, Poplar Bluff, Mo.; James A. Scott, Alton, Ill.; John N. Bissell and Anderson M. Robertson, St. Louis, Mo.

Springfield, O.—The Springfield Automobile Co., capital increased from \$10,000 to \$50,000.

Rome, N. Y.—Maxwell & Fitch Co., capital \$12,000. To manufacture and sell gas and gasoline engines. Directors, Harry B. Maxwell, Lauren M. Fitch and Christina S. Fitch.

#### BUSINESS TO BE WOUND UP

Syracuse, N. Y., May 30.—At a meeting of the stockholders of the Remington Motor Vehicle Co., at Utica, N. Y., last week it was decided that the company should not continue business. The board of directors was given power to sell and convey the property of the company. Negotiations for its sale to a New York firm are now pending. The concern was recently made an offer for the business, which was rejected. Within a few days an inventory of the property will be made, its value appraised, and then an agreement with the firm and the directors of the company may be reached.

#### MOTOR CAR ROUTES

Syracuse, N. Y., May 30.—The chamber of commerce of Geneva, N. Y., is considering the establishment of motor car routes out of the city, and one especially in connection with a Seneca lake resort to be built on the east shore of the lake opposite Mile point. Officials of the Rochester & Eastern road are also considering the question of running motor cars over the proposed routes in connection with its new trolley line into Geneva.

## MAY BUILD A CUP RACER

### Good Prospect that Next Year Will See 120-Horsepower Car Constructed—Racing Gossip

Hartford, Conn., May 30.—Indications go to show that while the automobile builders have done nothing for the Gordon Bennett cup race for this season, because of the great pressure of business in getting out vehicles for the trade, while those who built cars were not successful in the trials, another year will have a number of entries worthy of the international match. President Budding of the Electric Vehicle Co., announced yesterday that his company would probably have a car in the contest next year. In such a decision is made it will be very shortly and work on the car will be begun at once that there will be ample opportunity for trying out the car in this country before the race trials. It is believed there can be built in Hartford a car which will show a good deal faster time than anything that was done at the recent Empire faeco, while the Hartford manufacturers are claiming they are building stock cars which will make a far better showing. It is believed the car will be of 120 horsepower, and that it will be gotten ready in time for next winter's trials on the Ormond-Daytona course. Harry Payne Whitney is also said to have a car of this type built at the Electric Vehicle Co.'s factory in which he has a large financial interest as well as representing the interest of his father's estate.

Bald, who has been reported as engaged by William Pickens, owner of 999, to drive that car, has not left the service of the Electric Vehicle Co. and will probably drive the big car in the cup races if the car is selected, while Jed Newkirk, who has been pacing Walthour in France and who is one of the best men on a motor cycle, has been put aboard 999 to run it.

The success of the motor of the Pope-Hartford car is giving the managers of the Hartford factory some little cause for reflection. The motor is very powerful, showing 14 horsepower, and this was recently demonstrated when R. J. Vaughn and W. C. Walker drove ears up Church street hill, a 26 per cent grade with a very poor roadway, on high gear. The great power of the motor is leading to certain abuses of the car which less power would make impossible, and the serious danger presents itself of the unthinking drivers asking more of the car than its general construction warrants, or as such a type of car can successfully withstand.

#### MANY DEALERS IN SAN DIEGO

San Diego, Cal., May 30.—Automobile trade in San Diego is indicative of a big business this season. There are five garages now doing business and another nearly completed. The San Diego Cycle & Arms Co. is the pioneer of the automobile business and last year sold seven Cadillacs. This year it will again sell the Cadillac. John U. Widrin, the Oldsmobile agent, did the largest automobile business last season and will push the little car again this year. Late last year he became involved in financial difficulties, but has taken a partner with plenty of means and the Widrin Garage at Fourth and F streets will continue to get its share of the business, and is now doing more storage than any other here.

George Nolan's new garage at Fourth and C streets is about ready for occupancy. It has a frontage on Fourth street of 43 feet and will have a show room 40 feet deep, with large stock room, garage and repair shop in the rear. The storage department will be entered from C street, as will the repair shop. Nolan has the agency for the Rambler and has a number already sold. He will charge electric vehicles and, situated as he is, the nearest to the center of the city of any of the garages, he should get all the garage business he can care for.

Hunt & Hunt have had a good repair shop for some time and do general machine work as well as automobile work. Clarence Smith, a young man from Los Angeles, has opened a large place under the name of the San Diego Automobile Co., on H street, above Sixth. He has the agency for the Ford. Roy Howard has taken the agency for the Toledo, Northern and Thomas from the southern California agents at Los Angeles and last year sold several Autos cars.

#### OFFER CHAS. INSURANCE

Cleveland, O., May 28.—Henry M. Brooks & Co., fire insurance agents of this city, have notified owners of automobiles that they will write gasoline and electric machines on general form at the uniform rate of 2½ per cent per annum. With the letter of notification was sent a copy of the form that will be put on the policy. Owing to the standing of this firm, owners of machines need not have any fear of getting aside insurance. It has been almost impossible to secure insurance on automobiles at any price for more than a year past, and this announcement will, doubtless, be received with a great degree of satisfaction. As is understood from the letter, the insurance will cover machines while stored in a private barn, garage or storage house, or while in use anywhere in the United States or Canada. It also covers while in transportation by rail or water. At no time has there been so liberal a policy issued and those who are familiar with insurance rates state that the cost is comparatively low. Heretofore insurance could be had on machines owned by dealers only while they were contained in the store or display room. This will allow the machines in use to be covered also, it is believed, whether they are used for livery purposes or not.

#### WANT UNIVERSAL LIGHT LAW

The Motor Union of Great Britain has begun a movement among the automobile clubs affiliated with it to persuade the authorities in the country districts to pass a lighting law applicable to all vehicles using the highways. Motorists have expressed satisfaction with the step taken by the union and now it is suggested that the great English organization make up a set of speed ordinances and other regulations to be submitted to the local authorities through the land.

#### GOOD FIELD IN NORWAY

According to a French consular report, there are only about twenty automobiles in use in Norway, and all are of American make. No one has yet made a serious attempt at introducing them and although the roads are none too good and people seem to take little interest in them, the consul believes that an enterprising manufacturer who would do some attractive advertising and have a number of sample cars on the spot would find it a profitable undertaking.





## CROSSING NEW YORK STATE

Our first Sunday on the road was passed at Delhi, one of the prettiest of the Catskill mountain towns, and the place selected for the second night's stop in the big endurance run of

July. The town boasts of three hotels—all good—the Kingston, American house and Edgerton house. The rooms are clean and airy and the table fare very good. Delhi boasts of one automobile, an Orient buckboard, owned by the editor and publisher of one of the local papers. This is the only machine in that section and consequently it was necessary to enter and leave that town very carefully to avoid accident, horses pretty generally halting upon our approach.

Between Griffin's Corners and Margaretville we encountered a woman driving a sorry looking nag that never pricked up his ears at our approach, but the woman herself was terror-stricken, although we had slowed down and given her fully three-quarters of the road. The minute she saw us she pulled in on the reins. The horse came to a standstill, and as the pressure on his mouth increased he commenced to back. There was a deep ravine on the side of the road toward which the now frightened woman was pulling her horse, and the wheels cramping short we saw visions of a terrible accident, expecting both woman and beast to go over the bank.

"Hit him with the whip," we shouted as we scrambled out to render assistance, fearful that before we could reach the bridle all would be over. The woman finally beelied our shouts, and as she reached for the whip, the horse, relieved of the pressure on his mouth, stood still and a moment later as the whip descended upon his back, quietly trotted past the machine paying not the slightest attention to the Pathfinder.

A few miles further on we encountered a teamster who shouted at the top of his voice: "Go back, go back." We ran our wagon to one side of the road and turned off the power, but the irate farmer would not have it that way. "Go back," he still shouted; "Go back, I say." The horse in the meantime showed no indications of fear. "I tell you fellows to go back. I paid my road taxes and I am entitled to drive on this road; so you fellows had best go back." The situation was so ludicrous that all three shouted with laughter. "If you are afraid to drive your horse I will drive him by the machine for you," said Megargel, at which the timid farmer took courage and finally drove his horse past us, the animal showing little fear of the machine which had frightened the driver so much.

After leaving Delhi we ascended a long mountain road through Croton, to Franklin. The scenery at this point is the most picturesque in the Catskill region, and incidentally the hills are about the steepest. As we occasionally stopped to take snap shots along the roads the rural inhabitants, whose only experience with automobiles was in towing the participants of the endurance run up the steep, slippery mountain roads last fall, came to us with teams and rope thinking of course we were stuck on the hill and would readily part with our coin in exchange for a tow, even as did the motorists in the endurance run. They were both surprised and disappointed when we finally turned

on the power and went easily up the slope.

At Harpursville, 220 miles from New York, a small mountain hamlet that has stood there for years without any increase in population or wealth, we took dinner at the town tavern and were agreeably surprised to get one of the very best meals we had partaken of since leaving New York. The tavern is of the old colonial type and has withstood the storms of sixty-three winters. Here, as elsewhere among the mountains, we were forced to listen to the tales of the terrible trials encountered in the big endurance run.

The roadway from Harpursville to Binghamton, some sixteen miles, is in excellent condition. At the latter city we ran up to the new garage of Roy Whipple, who conducted us through the building, which will be used as the official garage in the coming St. Louis run, and also contains the rooms of the Binghamton Automobile Club, as well housed and prosperous an automobile organization as there is in the state outside of New York city. Mr. Whipple, who has charge of the coming run through his territory, is doing everything within his power to better the conditions of the roads in and around Binghamton and to provide entertainment for the tourists while in the Parlor city.

Instead of following the right bank of the Susquehanna through Union, as did the pilot cars in the last run, a much better route can be found by crossing the river at Endicott on the iron bridge connecting that village with Vestal, and on into Owego 7 miles further. At Nichols it is necessary to cross the Susquehanna on an iron toll bridge, the property of the Tiooga-Nichols Bridge Co. A charge of 25 cents was made, which sounded reasonable until we learned that teams of horses drawing heavy loads with steel tires were only charged 20 cents and light teams 15 cents, then we concluded that we had been overcharged or automobilized, as tourists put it when they are asked to pay more than a thing is worth, simply because they are touring in an automobile and are supposed to be wealthy on that account.

At Chemung we found an old friend in the blacksmith, who last fall supplied gasoline to the endurance run competitors. The smithy,

**EDITOR'S NOTE**—This is the second of a series of articles by W. S. Harrison concerning a New York-St. Louis trip.

A. F. Lowell, is of a mechanical turn of mind and while still running his forge is building an automobile on the side. He has been at work on his car for over 3 years and it will probably be completed within a few weeks. Like any automobile that had its keel laid down in 1901, it is old-fashioned before it can be completed. Originally he intended to have 26-inch wheels with regular buggy tires. He has changed his mind, however, and his machine is now being supplied with 3-inch clincher tires. His motor is an approved type, double opposed, very similar to the motor used to furnish the power for running his shop.

One of the worst sections of road encountered on our trip was that located between Dansville and Mt. Morris in Livingston county. Had it been a wet day it is doubtful whether we could have covered this stretch, the ruts being 6 to 8 inches deep, with an occasional hole twice that depth. The blame for this state of affairs is placed on the Greeland highway commissioners, said to be Ralph Rosebrough.

### MOUNTAIN MOTORING

Portland, Ore., May 28.—For the purpose of testing the feasibility of establishing an automobile road through that section of the state, State Engineer E. A. Hammond and J. O. Johnston have completed a trip from Shanks to Bend, in Crook county. The distance between the two points is 93 miles, which were covered in 1 day over the most difficult and inaccessible mountain roads in the west.

Mr. Hammond, as a result of the trip, is preparing plans for the construction of an automobile road to cover the entire distance between the two localities and which will serve the purpose of the lacking railroad. The mountain trail will be leveled, graded and oiled.

Those who are interested in this proposition believe that they have solved the problem of transportation through the mountains and that the antiquated stage will be supplanted by the modern automobile. The people all along the route are interested as much as the promoters, and instead of showing a disposition toward hindrance they are doing all they can to help the work of making the enterprise successful, realizing that they are to profit by it in a large measure.

If the scheme pans out in the passenger business, it is more than likely that freight trucks will sooner or later be found doing a good business.



AMONG THE HILLS OF NEW YORK STATE

## CLUB AFFAIRS



CHICAGO CITY'S COUNTRY CLUB HOUSE

**Dedicate Country House**—Last Saturday the Chicago Automobile Club, of Chicago, opened its country club house on the shore of Lake Michigan, near Evanston. This house was built by the now defunct Evanston Boat Club and is superb in its equipment as a country club. In fact, it is a much larger and better equipped club house than the Chicago city home of the C. C. A., though, of course, it is further from the headquarters of the Y. W. C. A. The Evanston house was recently described in *MOTOR AGE* and is an ideal place. Saturday afternoon forty cars left the Michigan avenue club house for the new suburban home, carrying about 200 members and guests. There was no set run to Evanston, the purpose being a rendezvous run in which members might select their own gait and course to the north shore club. However, the bunch kept pretty well together and the affair turned out to be a most excellent run on a most excellent day to the most excellent spot out of the city turmoil. The Evanston club house was reached about 4 p. m. and during the twilight the participants in the occasion amused themselves in getting acquainted with the new surroundings. About 6 o'clock an excellent luncheon, supper, dinner or meal, according to who you are, was served in the cheerful dining-room and then speech making, fun making and dancing filled the evening, a moonlight run Chicagoward closing the program of the afternoon and evening. On the whole, the occasion was one of the most satisfactory events in the history of the club, and the interest of the members presaged a hearty use of the suburban home during the coming summer. Dan, the club steward, was happy in a new suit of clothes and promised to make the new house a cheerful rendezvous for all runs to it of club members, either individually or collectively, and any guests they may happen to bring with them.

**Bams Officers**—The Minneapolis Automobile Club held its annual election of officers last week and chose the same officials who were at its head last year: President, E. J. Phelps; vice-president, George C. Christian; secretary and treasurer, Robert H. Hastings. The trustees chosen were: Asa Paine, Dr. Charles E. Dutton, Alfred F. Pillsbury, Charles S. Pillsbury, W. Y. Chute and Sven J. Turablad. The club will be one of the foremost factors in automobile activity in Minneapolis this summer.

**First Run Sunday**—The Richmond County Automobile Club, a comparatively newly-formed organization of Staten Island, New York, enthusiasts, had its initial run Saturday. The route covered most of the fine roads of the Island from New York bay to Tottenville. A shore dinner at New Dorp beach concluded the run, which had seventeen cars in line.



IT WAS NOT A STAG PARTY

**Will Organize Club**—There are about forty motor cars owned in Nashua, N. H., and there is talk about organizing a club and arranging a race meeting soon afterwards.

**Brattleboro Elects**—The following officers were elected last week at a meeting of the Brattleboro Automobile Club, of Brattleboro, Mass.: President, C. A. Harris; vice-presidents, C. W. Dunham and F. R. Vaughan; secretary and treasurer, E. D. Whitney; executive committee, W. B. Vinton, John Manley and C. A. Smith.

**Forty-six Per Cent**—An evening automobile parade arranged by the Binghamton Automobile Club, Binghamton, N. Y., obtained a great success last week. The local papers, however, assert that quite a number of the club members were dissatisfied at the fact that only forty-six motor cars were in line, whereas there are about 100 owners of automobiles in the town.

**Denver Has a Club**—Some enthusiastic motorists of Denver, Colo., have organized the Colorado Automobile Club, which was incorporated a few days ago. The membership will be open to automobilists of the entire state, but headquarters will always be in Denver. The incorporators are F. L. Bartlett, Dr. E. P. Hershey, D. W. Brunton, A. R. Daniels, W. H. Bergtold, Bryan Rhynwood and D. G. Thomas.

**Unecda Name**—An automobile club was formed May 27 by forty-five motorists of Trenton, N. J. No name was selected for the club but the following officers were elected: John A. Campbell, president; Karl G. Roebeling, vice-president; John W. Foster, treasurer; Wilbur F. Sadler, Jr., secretary; executive committee, Thomas H. Thropp, John L. Kuser, John S. Broughton and Charles S. Van Syckel.

**Two Suburban Homes**—Instead of establishing a suburban club of its own, the Automobile Club of America has concluded arrangements whereby its members have been extended the privileges of the American Yacht Club at Milton point on the north shore of Long Island sound and the Manhasset Bay Yacht Club at Port Washington, L. I. Both have fine houses. The former is a 30-mile and the latter a 20-mile ride from New York. At Manhasset bay the American Power Boat Association has established an official mile course and has conveniences for the keeping of motor boats. J. Herbert Carpenter, chairman of the A. C. A. motor boat committee, is securing a registry of the motor boats owned by club members with a view to the promotion of some races in the near future.



FROM THE CLUB HOUSE VERANDA

**Two Important Questions**—The Rhode Island Automobile Club will hold its regular monthly meeting this week, and at that time will vote on the proposed merger of the A. A. A. with the A. M. L., and as it is one of the few clubs which have not taken action on this question the decision is awaited with some interest. Dr. Julian A. Chase, president of the club, and at one time the president of the A. A. A., is known as an opponent of the scheme, but the general opinion of the club has not as yet been expressed. The board of governors has taken particular pains to inform itself on the various phases of the proposition, and whatever action is taken will be only after mature thought and deliberation. The other matter of importance to come before the meeting is the selection of a secretary to take the place of H. H. Rice, resigned. As the work of conducting a race meet, which the club has undertaken for the last 2 years, falls on the secretary, it is of particular importance that a man of ability be chosen. Last week the club sent to H. H. Rice, its former secretary, who has removed to Indianapolis to take a position with the Pope Motor Car Co., a beautiful loving cup, standing on a mahogany base. The cup itself is over 7 inches tall, is gold lined, and the decorations are beaten into the silver.

**Club Men After Law Breakers**—President C. M. Taylor and Secretary Howell of the Columbus Automobile Club, Columbus, O., have complained to Mayor Jeffrey that professional chauffeurs are continually engaged in breaking the laws in regard to speed on the streets and the members of the club come in for the blame. They mentioned especially the man employed by Governor Herrick, who, according to Dr. Taylor, is the worst in the city. Chauffeurs employed by Louis P. Hooper and Thomas Hardesty were also mentioned as men who pay no attention to speed ordinances. The gentlemen with these men brought to time, as members of the club do their best to have all laws obeyed. They also made complaint as to the condition some of the streets are left in by telephone companies that are laying their wires in conduits and the obstructions left by the water works and gas company employees. They state that they are careful to keep within bounds in all respects and ask that the various companies tearing up the streets have them put in as good order as they found them.

**Want Doctors' Aid**—The German Automobile Club has sent notice to the trade and daily papers that all German physicians who intend seelag the Gordon Bennett race place themselves at the disposal of the Gordon Bennett committee and advise the club where they will be quartered.

# THE READERS' CLEARING HOUSE

## CATALYTIC IGNITION

Kalamazoo, Mich.—Editor MOTOR AGE—In the case of a motor for a strictly racing automobile, which would not be run at varying speeds and which would not, accordingly, necessitate changes of the spark lead, would it not be a good scheme to fit the motor with some form of catalytic ignition, such, for instance, as that kind in which a platinum wire is heated to incandescence by an electric current which is passed through a rheostat? This form of ignition should be positive and, inasmuch as it is extremely simple, would reduce considerably the mechanism of the motor.—H. B. COOMBS.

In a racing car it is more necessary to have a variable spark lead than in a touring car. The humidity and temperature of the air cause a considerable variation in the position of the spark in the cylinder, for maximum power at a specified motor speed. The heating of a wire by a current of electricity would produce a simple form of the old "hot tube ignition." This construction would be harder on the battery than a spark coil system. Heating a platinum wire would not be catalytic ignition, but incandescence ignition. Catalysis is a chemical change effected in a substance by an agent that remains stable. For instance, spongy platinum when heated will remain incandescent in the presence of hydrogen, the chemical change taking place in the platinum. Ordinary platinum wire heated, undergoes no chemical change, so the effect is one of incandescence and not catalysis.

## IGNITION BATTERIES

Santa Fe, N. M.—Editor MOTOR AGE—How is the horsepower of a gasoline motor determined? How can one tell the number of revolutions per minute at which to run a motor to secure the best results? How are dry battery cells made? Would it be advisable to make one large one equivalent in size and efficiency to six or eight small cells to use instead of the battery of small ones?—J. M. D.

The horsepower of a motor is determined in three ways, by a dynamometer or Prony brake, by an indicator card, or by calculation. Assuming a motor of average compression a good formula is as follows:

$$H. P. = \frac{D^2 L N}{15,500}$$

where D is the diameter of the cylinder in inches; L, the stroke in inches, and N, the number of revolutions per minute. The 15,500 is a factor depending upon the design of the motor and varies from 14,000 to 18,000. Dry cells vary in construction but consist essentially of a zinc cup. In the center is placed a carbon stick forming the inactive plate. The zinc is lined with the chemical element corresponding to the acid solution in a wet cell. The carbon is surrounded with a semi-solid compound to prevent polarization. After these are in place the cell is sealed with bitumen. One large cell would not serve in place of eight small cells because it would only have

the voltage of one of the small cells no matter how large it was made. If eight times as large it would have eight times the number of amperes of a single cell. The number of revolutions per minute will depend upon the weight of the reciprocating parts, the valve areas, the compression and the fly wheel inertia. Heavy pistons and connecting rods, small valve proportions and a heavy fly wheel will prevent high speeds. With high compression it is possible to obtain greater speed from the motor if the other parts are correctly proportioned.

## NATURAL CIRCULATION

Reeseville, Wis.—Editor MOTOR AGE—It is not convenient to use a pump in the water circulation system of my car and so I have decided to place the tank and radiator, in the positions shown in the accompanying drawing, in order to provide a natural circulation system. The motor is of 4½-inch bore by 6-inch stroke. The water tank is 26 inches long, 7 inches wide and 8 inches deep, with sixteen 1½-inch ventilation tubes extending vertically through it. The water level is normally 7 inches above the top of the motor cylinder water jacket. The lowest tube of the radiator is 2 inches below the bottom of the water jacket. The inlet to the tank is level with the top of the water jacket. The direction of circulation is shown by the arrows. Is this system all right? If the relative levels are not correct will you tell how the factors should be placed?—P. A. S.

For successful thermo-syphonic cooling, large openings in all passages are essential, and the difference in levels should be as small as possible, so as to facilitate the convection currents. The arrangement shown should operate all right. Insert a pet cock at the highest point in the system between the motor and the radiator, and another at the lowest point between the radiator and the tank. The former will allow the removal of air if the circulation should ever be stopped for this reason.

## USE OF STEERING CHECK

Toledo, O.—Editor MOTOR AGE—Would it be practicable to equip a light car with a steering check, such as the Lemp, and operate this with an ordinary steering wheel, instead of with a side tiller, as usually applied, or would the leverage afforded by the steering wheel be too small for the easy operation of the direct steering connection secured through the medium of the steering check?—G. N. R. CASEY.

An hydraulic or a mechanical check may be attached to any type of steering gear, although as there must be some lost motion in all these devices it will be magnified between the check and the steering wheel in proportion to the ratio of the worm wheel to the worm. These devices are preferable in connection with a lever steer. Their object is to produce a lock or strain absorbing effect between the wheels and the controlling lever. In a worm and wheel gear this is taken up naturally as long as the angle of the worm is 20 degrees or less, producing an irreversible steering gear with a minimum of lost motion.

## MOTOR PISTON SPEED

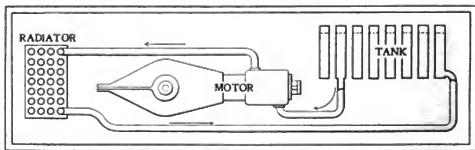
Columbus, Neb.—Editor MOTOR AGE—What is the maximum limit to motor speed in feet of piston travel per minute? I have heard this given as ranging all the way from 600 to 1,200 feet and have, furthermore, heard of motors in use which run at still greater speed. Other things being equal could an air-cooled motor be run successfully at as high a speed as a water-cooled motor, or would the slightly less efficient cooling of the former prevent it from being run at the same speed.—J. B. DAY-BURG.

Practice at the present time limits the motor piston speed to 750 feet per minute where the life of the motor has entered into the design. Speeds very much in excess of this are undesirable and will rack the motor in a short time. Other things being equal the air-cooled motor will heat more rapidly when operating at high speeds unless a forced circulation of air is used, in which case it is merely a question of bringing a sufficient volume of air into contact with the radiating surface to make the efficiencies the same.

## STRAP AND RATCHET STARTER

Philadelphia—Editor MOTOR AGE—Is a ratchet and strap device for starting a motor successful? I have noticed that while this device was used on quite a few cars several seasons ago it has nearly all instances been replaced by the crank. It would serve my purpose nicely to use the ratchet and strap, so that the motor could be started from the seat, but I do not wish to go to the trouble and expense of applying it to the machine unless it is entirely practicable.—ED. CASTLEMAN.

The ratchet and strap device can be used successfully to start the motor. It would seem much easier, however, to adopt some form of crank to perform this function. The ratchets, springs, and strap are rather bulky compared with a crank, but this plan is practicable. In case it is decided to use the strap, MOTOR AGE advises the attachment of the plate carrying the ratchet pawls to the crank shaft and to have the pawls weighted so the centrifugal force will throw them out of action when the motor is in operation, which will do away with the "click" that would be produced by the pawl upon the teeth.



WATER CIRCULATION SYSTEM PROPOSED BY P. A. S.

## GARAGE GOSSIP



NEW HEADQUARTERS OF HAYES AUTOMOBILE CO., OF MINNEAPOLIS

**Fords in Washington**—A. L. Kull & Co., of Washington, D. C., have just received a large shipment of Ford cars. The Ford is in high favor in Washington and Mr. Kull is sanguine of a big sale for them.

**Brokaw Has a Fiat**—W. Gould Brokaw has bought the 60-horsepower Fiat runner which Claude Fogelin was scheduled to drive at the Boston meet. A counterpart of the car with touring body has been ordered by L. L. Bidle, of Philadelphia.

**On the Wrong Street?**—A garage and automobile livery has been started on Church street, in Portsmouth, N. H., by Charles A. Linstrom and Jean Rollue. The building has accommodations for about fifteen motor cars, and a small repair shop has been put up.

**South in Good Form**—Angustus H. Hurley has just returned from a southern trip in the interests of the Electric Vehicle Co., and reports great interest in automobiles in that section. Mr. Hurley will from now on be stationed at the New York branch devoting himself to business vehicles exclusively.

**Talking Royal Tourists**—J. W. McCrees, sales manager of the Royal Motor Car Co., of Cleveland, O., was in New York last week discussing with the Duerr-Ward Co. increased shipments of Royal Tourists, whose merits have found recognition in a prompt and considerable metropolitan demand.

**Olds Coming Fast**—Associate Manager Howell, of the Oldsmobile Co., of New York, says he is promised by the factory 120 Olds runabouts and forty touring cars before July 1. The latter are making a great hit. A driver of one of them drove it 120 miles in a little over 4 hours the first day he had it out.

**New Garage in Allegheny**—The Artzberger Automobile Co., of Allegheny, Pa., will begin building a new three-story brick building which will be used as a garage and repair room. Steam cars will also be built. It will be completed by September 1 and will then be one of the finest automobile garages in that section of the state.

**Boytton Boosts Bergs**—Charles Clerk Boynton, formerly head salesman for the Standard Automobile Co., has gone with the Worthington Automobile Co., which handles the Berg and Boole cars in New York, and will be installed as manager of the great garage the company is building as soon as it is completed this autumn.

**Added the Yale**—A. F. Chase & Co., Oldsmobile agents for the northwest, are safely settled in their new building on Third avenue, south, Minneapolis, Minn. The building, which is two floors and basement, was put up especially for the Chase people. To the Oldsmobile line Chase & Co. have added the Yale to replace the Searchmont.

**Northerns in Brooklyn**—Peter Fogarty, the Greater New York agent for the Northerns,

has given the Brooklyn sub-agency for them to A. G. Southworth, who has a garage at 10 Clinton place. Mr. Fogarty has opened a repair shop and garage at 109 West Thirty-seventh street, separate from his salesroom on Thirty-eighth street.

**Ready for Tourists**—His business having outgrown the old quarters, W. C. Rudy, of Lima, O., has erected a new garage, 50 by 70 feet, at 112 Elizabeth street. It is equipped with a full line of machines and appliances, including an 8 horsepower motor generator for charging electric vehicles. Especial arrangements have been made for caring for the machine of tourists.

**Expects New Orleans**—E. J. Willis, the Waltham Mfg. Co.'s New York agent, is expecting this week the first car load of the New Orient buckboard four-passenger surreys, which will sell for the old price of \$425. The power has been raised to 5, the springs have been made longer, and the axles heavier and a new and larger muffler has been supplied to insure noiselessness.

**De Dietrich in Front**—R. E. Jarrige, manager of de Dietrich & Co.'s American Branch, New York, says that the de Dietrich finished practically third as well as fourth in the French trials. As the Tarent-Mery, which was in the place in front of Gabriel and his de Dietrich, is built in the Luneville factory, the de Dietrich firm having purchased the Tarent-Mery engine patent.

**Catalogue in Demand**—Charles E. Miller, of 97 Reade street, New York, who conducts an extensive jobbing business in automobile parts and accessories, has had his first issue of 20,000 catalogues exhausted, and has been forced to order 10,000 more. The catalogue embraces domestic products and European importations, carrying almost every part of an automobile and every sundry having to do with it.

**Daimler Garage Completed**—The Daimler Mfg. Co., of Steinway, L. I., has completed the alteration of 10 West Sixtieth street, New York, for the purposes of a metropolitan sales headquarters and garage. The American Mercedes, whose notable and original feature is a flexible frame, will be pushed vigorously by Clifford M. Bouggy, sales manager of the company, who will make his headquarters hereafter at the New York garage.

**Good Boost for Moyas**—The Consolidated Motor Co., of New York, has shipped this week to St. Louis four vehicles for its exposition exhibit. President Cryder was in receipt last week of a letter from the American Express Co. declaring its satisfaction with the results of four weeks of service use of the Moyas truck, which was a gold medal winner in the A. C. A. business wagon test. This company says the results show a saving of fully 20 per cent first cost and cost of opera-

tion considered as compared with horse drawn wagons.

**Many New Places**—The best resident sections of the south side of Chicago are now pretty well dotted with garages, many of which are especially constructed. C. A. Cory, the Thomas agent, was the pioneer in this section, and while it was predicted he could not succeed so far out as Fifty-third street, he has proven to the contrary.

**Wants Big Damages**—The Washington Electric Vehicle & Transportation Co., which maintains a large garage at the corner of Fifteenth street and Ohio avenue, and which is the local agent for the Columbia gasoline and electric cars, has been made defendant in a \$20,000 damage suit filed against it by William Grenfell, by his next friend, Fred W. Grenfell, for injuries claimed to have been suffered by him as a result of the negligence of the defendant. The plaintiff, a child about 8 years old, was severely burned by some gasoline belonging to the company which was thrown upon him by some boys while he was playing outside the company's garage.

**Strike Delays Deliveries**—The strike of the New England freight handlers has caused New York dealers much embarrassment, both in the delivery of cars to customers and in their receipt from factories located in that section. The automobile in this emergency has proved its own trade salvation. Manager Davis, of the Knox Automobile Co., and his assistants have been of late driving the cars down from Springfield, a distance of 156 miles. Some of the runs have been made in 7 hours, and even with customers taking them for practice the distance has been covered between morning and evening. F. A. La Roche has been making deliveries of Darragnets to Boston and other New England buyers in the same way. This method has the advantage of giving both dealer and buyer a test of a car before receipt or delivery.

**The Metropolitan White**—The White Sewing Machine Co. has moved its automobile station and garage in New York from 215 West Forty-eighth street, to 42 West Sixty-second street, the building formerly occupied by the Mineola stables. The building being occupied is a five-story and basement structure, and when the work of remodeling has been completed it will make one of the most complete salesrooms and garages in the city. The first floor will have well fitted waiting rooms for ladies, a smoking and writing room for gentlemen, and plenty of private lockers for the taking care of the belongings of owners of White cars, which are cared for at the station. On this floor will be kept the cars which are in constant use. The basement will be given over to those who care for their own machines, and to chauffeurs. Part of the second floor will hold the offices of the company, the balance being devoted to a salesroom. The fourth floor is fitted with all sorts of tools and machinery for the making of machinery, and the third and fifth floors are to be used for storage purposes. When finished, the building will have sufficient accommodations to care for at least 300 cars. An elevator of large capacity makes access to the various floors easy. As the new location is just west of Broadway, and is in the residential section, it is exceptionally good, and as the White company is in the future to make a specialty of taking care of the cars of its meke for customers, the new headquarters is sure to be a busy place.

# FROM THE FOUR WINDS



TESTING PACKARD CARS PRIOR TO EQUIPMENT WITH REGULAR BODY

**Still Another**—Citizens of Brookfield, Pa., are contemplating the establishment of an automobile factory in their town.

**Certainly**—News comes from Moline, Ill., that in a recent debate somebody claimed that a \$2,000 automobile is of more use than a \$2,000 team.

**Safe Speed**—The speed limit for automobiles in Portage, Wis., is 10 miles an hour outside of the business district, where a speed of only 4 miles is permitted.

**Rain at Indianapolis**—On account of rain, the track on the fair grounds in Indianapolis, Ind., was in such bad condition that the races scheduled for Decoration day had to be postponed.

**Made Local Record**—Truman H. Newberry recently drove his Packard voiture legere from Pontiac to Detroit, establishing a local record by covering the distance separating the two localities—26½ miles—in 42 minutes.

**Motor Cyclists To Gather**—The annual meeting of the Federation of American Motor Cyclists will be held in Cambridge, Md., this year and the occasion will also be used for an endurance run from New York to Cambridge.

**House of Its Own**—The Electric Storage Battery Co., of Philadelphia, has taken a residence at 4472 Forest Park boulevard, St. Louis, for the use of members of its staff attending the exposition. The company's exhibit is practically complete and contains many interesting features.

**Ready for the Caravan**—Aldrich & Raymond, Wauson, O., have recently started an automobile repair shop and are doing well. They have also a good supply of parts and accessories on hand, and as the St. Louis caravan will pass through Wauson it might be welcome news to motorists who may need the services of these repairmen.

**Councilman Was Shown**—The councilmen of Jacksonville, Fla., together with representatives of the Florida Automobile Association, have drawn up an automobile ordinance which will probably be passed this week. Instead of a speed limit of 6 miles an hour, as suggested originally by one of the members of the council, an agreement was reached whereby 10 miles will be permitted. It may be

well to say that the councilman was not converted until he had been taken out on a few automobile rides at a bit more than 10 miles an hour. He then recognized that 6 miles was rather slow. All motor cars must have two white lights visible at a distance of 300 feet ahead of the car and red lights in the rear. Drivers must not be under 16 years old and cars must be registered and numbered. Private cars are exempt from tax or license charge. Dealers in automobiles will be allowed to have in their possession duplicate numbers for machines in stock and for sale, in the usual course of their business, but this does not apply to machines for hire, and such numbers are not transferable.

**All Sorts of Speeds**—An automobile ordinance is being prepared by the councilmen of Elgin, Ill. One alderman suggested 8 miles as the limit in the streets of the city. Another moved that 7 miles was plenty, to which a third retorted that 8 miles within the fire limits and 10 miles beyond would be more satisfactory. A fourth member then joined the chorus and said he thought 12 to 15 miles an hour would not be harmful, inasmuch as many eastern cities have such an ordinance. Alderman Schramm suggested that each of the fourteen aldermen bring in an ordinance at the next meeting.

**Exports Doubled**—The statistics published by the department of commerce and labor at Washington, D. C., show that during the month of April this year automobile and parts valued at \$230,758 were exported to foreign lands. This is an increase of \$102,078 over the export trade during April, 1903. During 10 months ending April our exports have reached \$1,542,335, against \$894,521 during 10 months ending April, 1903, and \$668,731 during 10 months ending in April, 1902.

**Automobile a Life Saver**—Notwithstanding speed regulations, a physician drove his automobile from Fort Wayne, Ind., to Kimmel, a distance of 40 miles in 85 minutes and was able to save the life of two people. If the doctor had taken a train he would have had to wait several hours and with any other kind of vehicle he could not have covered the distance in less than 6 hours. It was an

instance where the automobile was as much the cause of the saving as the doctor's services.

**Well in the Millions**—The value of the 39,702 automobiles and motor bicycles which were registered in France last year is placed at \$32,400,000.

**Hungary Buys Cars**—It is said the value of the motor cars annually imported into Hungary is about \$125,000, of which \$30,000 worth are of French origin.

**Streator Is Jealous**—Twenty-four residents of Kankakee, Ill., own automobiles, while there are only four owners of motor vehicles in Streator, Ill., which has a much larger population, and better paved streets.

**Shirt Waist Dance**—The young shirt waist women of Gray & Davis, lamp manufacturers in Amesbury, Mass., gave a shirt waist party May 20. The dancing program was quite a feature, being gotten up in the shape of a Gray & Davis Ballet lamp.

**Chinese Emperor a Motorist**—Seventeen motor cars were recently imported into China from Germany for presentation by the viceroy of Chihli to the Chinese emperor. They are now being tried on the station road at Tientsin, a dozen or more being on the road at the same time.

**Seeing Niagara in Automobiles**—The Niagara Falls Automobile Transit Co., Niagara Falls, N. Y., was organized recently by George L. Gaiser and Harry True. The office is located at 339 Riverway. The feature of the business will be to take tourists and excursion parties to all points of interest near Niagara Falls.

**Look at Your Policy**—It has been stated by the agents of a fire insurance company that 99 per cent of the automobile owners overlook the provision in their insurance contract, which states that the policy is void in case gasoline is kept on the insured premises without a special permit having been issued by the interested insurance company.

**Wholesale Hauls**—New Britain, Conn., may claim the record for arresting the largest number of automobiles in one day. On May 22 twenty-five motor cars were stopped by a deputy sheriff and a police officer, who were a quarter of a mile apart and did the timing over that distance. From the time taken for that quarter of a mile resulted the arrests.

**Officials Inspect Road**—May 19 the minister of the interior of Prussia, the minister of public works, the governor of the province of Hesse-Nassau, in which is located the Taunus race course, and about twenty other high officials, together with the members of the Gordon Bennett sports committee of the German Automobile Club, went over the roads to ascertain their condition and give final instructions if necessary.

**Quarter-Million Automobile Outfit**—F. T. F. Lovejoy, the multi-millionaire steel official of Pittsburgh, Pa., is preparing to dispose of his magnificent stable of fine horses and substitute automobiles exclusively for the use of himself and family. His new stable in Braddock avenue has just been completed at a cost of \$175,000, but no horses will enter it. Instead Mr. Lovejoy will spend \$60,000 in buying the latest improved automobiles in addition to his present collection, which is by far the finest private automobile outfit in Pennsylvania, with the possible exception of the man-



# MOTOR AGE

VOL. V. NO. 23

JUNE 9, 1904

\$2.00 Per Year

## ROAD RACING MADE SAFE

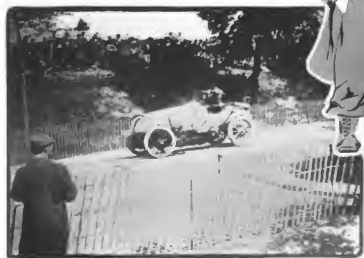
**T**HE disastrous Paris-Madrid road race of last year, whose fatalities caused its interdiction after the first day's stage, naturally resulted in a more determined effort to solve the road racing question in France than in any other country. Ever since the race both automobilists and public officials have given the subject of automobile speeding and automobile racing much consideration, and this has resulted in more than talk. Practical measures were evolved for rendering road races, of even a long line of starters, reasonably safe so far as the public is concerned, and when the climactic race for positions on the French team in the James Gordon Bennett international cup race were run recently, these measures were put into effect and found to be availing.

Briefly, the measures employed in this race, which serve as an excellent criterion for future road race pro-

cedure from which the drivers were again permitted to speed as fast as they might. The rules were exceedingly strict and any driver who attempted to go faster, or who even tried to keep on the same line as the piloting soldier-cyclist, was subject to immediate disqualification. Not one of the twenty-nine competitors broke the rule.

The regular soldiers were posted about 150 meters—165 yards—apart on both sides of the course and had simply to see that no one crossed the road, and that nothing was thrown upon it to endanger the contestants. They were not compelled to stand like a German sentry, but were allowed to indulge in conversation with the people behind them. Some of these soldiers showed that they were very much interested in automobile matters and that they were following the racing game closely.

Besides this human fence, there was also a fence of



THE FENCE OF SOLDIER SENTRY



ORDER PRESERVED BY A CONTROL

ceedings, consisted in so guarding the road that it became an enclosed racing highway. Spectators could not be on the road at the times the contestants were on it without being fully-armed trespassers. Also, trespassing, if such it might be called, was rendered extremely difficult. The road, for the time being, was for the exclusive use of the racers, and the public was not even allowed to endanger itself by infringing upon their temporary rights by crowding over the lines onto the road at places of especial vantage for viewing the race. Those in charge of the affair operated on the principle that the public will take all kinds of chances, and so arranged the policing and other restrictions upon the public that it could not very well take a dangerous chance, even of its own accord and knowingly at its own risk. It was a case where officials took the responsibility.

Including local officers of the law, there were nearly 6,000 men engaged in watching the 93½ kilometers of road, over which the competitors drove six times. Five thousand of these men belonged to the regular army, while 200 were military cyclists. The latter were stationed near the different controls and preceded the drivers of the competing cars to the control, and then again out of the control to the point on the

road and back, which, while not encompassing the entire course nevertheless covered nearly two score miles of road on both sides. In almost all the towns and villages along the route, and generally at all the more important crossings, the fences were made of wire, while on other points of the road where it was thought that there might be crowds, wood fences were put up.

Thus between military escort, preventing the racers from speeding through neutralized stretches, and soldiers and fences, keeping the spectators entirely off the road, the public was made as safe as though occupying positions along the fence at a track race meeting—more so, in fact, for there was no speeding past the biggest crowds.

The whole affair was an example of European thoroughness—a good example of the benefit to motor car racing of taking care of a reckless public, for it has caused so much favorable comment that it has put new life into road racing in a country where at one stage of the game it was all but prohibited.



# SCOTCH RELIABILITY TESTS

## Thirty-One Entries and Thirty Starters, While Nearly All Went Over the Glasgow-London Road—Prizes Awarded in Three Classes—Tests in Other Foreign Countries

The annual Glasgow-London reliability run, organized by the Scottish Automobile Club, was held for the third time May 19 and 20, and thirty of the thirty-one cars which entered for the test were at the starting post. The number of competitors was not by any means so large as had been wished for, but although the distance separating the two cities is only 413½ miles, the route is considered one of the most difficult in the kingdom.

Last year there were twenty-two motor cars and seven motor cycles in the run, while the previous test, which was the first one, only attracted eight drivers of automobiles. This year, according to an unofficial report, twenty-five cars completed the journey successfully and will be awarded medals.

Owing to the difficult nature of the road, the run was divided into two stages, the first from Glasgow to Leeds and the second from Leeds to London. During the second part of the journey a hill-climbing competition took place over the Woodcock hill, near Elstree. This hill is 710 feet long, with an average grade of 10 per cent, the steepest part being 14 per cent.

There were no special features during the first part of the trip and twenty-eight cars reached Leeds in perfect order, the other two having had minor accidents, compelling them to give up. At no time of the run was there a tendency toward speed, and an easy-going gait was maintained all the time. The trip from Leeds to London was also a leisure affair and the automobile club house at Piccadilly was reached by the first car at 6 o'clock in the evening, while the last one was recorded at a few minutes past 8 o'clock. The results of the hill-climbing contest were as follows:

Gasoline cars having one cylinder—Six horsepower light Wolseley in :50 2-5; 6½-horsepower Cadillac in 1:03 1-5; 6-horsepower Vauxhall in 1:29 1-5.

Gasoline cars having two cylinders—Twelve horsepower light Eagle in :55 1-5; 12-horsepower de Dion-Bouton in :57 2-5; 10-horsepower Argyl in :58.

Gasoline cars having three or more cylinders—Sixteen-twenty-horsepower Martini in :32 1-5; 24-horsepower Delahaye in :34 4-5; 20-horsepower Thornycroft in :38 3-5.

In the 24 hours' motor cycle endurance run from London to Glasgow, which was run May 20, there were seventy entries, forty-six starters; and twenty-two motor cycles which reached destination in time to be qualified for the gold medal. A feature was that twenty of the machines had belt transmission, the other two having chain transmission. Ten of the motor bicycles had 2½ horsepower motors; eight had 3 horsepower motors; three had 3½ horsepower motors and one was equipped with a 2 horsepower motor.

In the recent competition arranged by the Automobile Club of Italy, which covered the regularity of running, facility to climb hills, quick stopping on hill and flat roads, fuel consumption and general appearance of the cars, the Oldsmobile won the first prize in the class of cars reserved for those carrying a useful load of 330 pounds, besides two passengers.

The Italian voiturette Franchini was awarded second prize and the German voiturette Wartburg Eisenach received third prize. In the second class, in which were vehicles carrying four passengers and a load of 660 pounds, a 16-horsepower Martini, made in Switzerland, was first; a Fiat of similar power was second; a French Darracq motor car of 15 horsepower was third, while the Italian vehicle Bianchi, of 16 horsepower, secured the fourth prize. The



GLASGOW-LONDON RUN—WOODCOCK HILL

Oldsmobile was awarded a special prize for having consumed the least quantity of fuel, 97 pints for a total of 503 miles.

The week of tests and reliability trials recently held at Tours, in France, are ended, and the following rewards have been made: Automobiles valued at less than \$1,200—First and third prizes, de Dion-Bouton; second prize, Delahaye; fourth prize, Boyer. Automobiles valued at from \$1,200 to \$2,400—First and second prizes, Brouhot; third prize, de Dion-Bouton. Vehicles valued at more than \$2,400—

First prize, Delahaye; second prize, Peugeot; third, Herald; fourth prize, Chenard-Walcker. Motor cycles—First prize, Bruneau; second and third prizes, Lamsauiere. Consumption test—First prize, de Dion-Bouton. Regularity—Prizes, Brouhot, Peugeot, Delahaye and Boyer. Quick starting—Peugeot. Starting on the hill—First prize, Herald; second prize, Chenard.

The Touring Club of Italy has arranged a motor cycle endurance test for June 19. The distance will be 125 miles and a time limit of 12 hours has been imposed. The Brescia cup race for motor cycles will also be run during June, and already forty-eight prospective competitors have entered, representing the makes of France, Italy, Germany, Austria and Belgium.

### GOBRON AFTER THE BARON

After Baron de Caters had broken the world's kilometer record on his 20-horsepower Mercedes racer, at Ostend, Belgium, Gobron, of the Gobron-Brille concern, challenged him for a match race against Rigolly, the latter to drive his 110-horsepower machine, with which he established the preceding record at Nice. The Belgian sportsman answered that the Frenchman should first go after the record and that if he broke it he would be willing to meet him in a match race. Mr. Gobron did not like the proposition, to which Baron de Caters replied that the best thing to do would be to wait until the French eliminating race had been run, and that if the Gobron-Brille car qualified, the baron would wager \$2,500 in favor of some charity that he would beat the Frenchman in the Gordon Bennett race. The Paris manufacturer replied that there was no question about the Gordon Bennett race, but simply a matter to be settled over a distance of 1 kilometer and that he is still waiting for a short and straight answer to his challenge.

### EDGE FOUR-FLUSHES

According to a cablegram, S. F. Edge, who had declined to be a member of the English Gordon Bennett team, on account of the refusal of the Automobile Club of Great Britain and Ireland to include Clifford Earp in the team, has changed his mind, upon the advice of the secretary of the club, who informed him that his withdrawal from the team could not be accepted and would render him liable to expulsion. The English representatives in the cup race will thus be, Sidney Girling, Charles Jarrott and S. F. Edge, with J. Hargraves and J. W. Stocks as reserves.



GLASGOW-LONDON RUN—STOP FOR LUNCH AT STAMFORD

## RECORDS CUT AT ARRAS

### Many New French Class Figures Established in the Three Days of Racing and Hill Climbing

Arras, France, May 27.—The first 3 days of the week of automobile events which began here May 24 were successful beyond expectations and from almost the first event records were broken. It was regretted that the meeting had not been postponed, because starting only 4 days after the French eliminating race a great many of the drivers in this event were busy either with getting their damaged cars in order or taking a well-earned rest. Nevertheless, Gabriel, A. Clement, Pelzer and a few others came over the roads in the cars they drove in the Ardennes race and started in different events.

As at the great road race, the measures taken to guarantee against possible accidents to the spectators were perfect. Two brigades of gendarmes on foot and one mounted brigade, together with volunteers, lined the road de Douai where the speed trials were held. There was really only one event run on May 25, but it was subdivided. The time for a mile standing start was taken first and the drivers then continued to cover a kilometer flying start.

Anzani on an Aleyon motor cycle made the best time in the motor cycle class. He covered the mile in 1:07½ and the kilometer in :36½. Demeter and Lamberjack, both on Griffon machines, were respectively second and third, the former covering the fastest kilometer by going the distance in :35½. Rigal on a heavier machine made poor time owing to a break. Villenain in a Darracq voiturette did a mile in 1:08½, and the kilometer in :34½, thus establishing two new French records.

In the next event, which was for light cars, all three competitors broke world records. Becconais and Baras, both in Darracq cars, covered a mile standing start in 1:00½, and Henriot, in a Clement-Bayard, in 1:04½. While the driver of the Bayard car was slow to start in the mile, he was much faster than his companions in the kilometer, going the distance in :28½, which is a new world's record for light cars. Becconais' time was :30½, and Baras' time :31½.

No records were broken by the heavy cars. Wagner in a Darracq was the fastest, going the mile in 1:02½ and the 1,000 meters to :28½. Young Clement in his French eliminating trial race, and Gabriel in the de Dietrich, were tie for second place, the former running a faster mile, while the latter made up the difference by going the kilometer 1½ seconds faster than Clement, Pelzer, Chandiand and Le Houx, all three driving their cup race cars, followed in the order named.

The times made by the tourists were slow compared to the times of the racers, but the people witnessed their performances with interest. In the class for double-cylinder cars, Delmasure in a 12-horsepower de Dion-Bouton, covered the mile in 2 minutes and the kilometer in 1:05. There were nine competitors in the class for four-cylinder cars of from 12 to 20 horsepower. There were seven different makes of cars, out of which a 20-horsepower Serpollet driven by Dreye proved the fastest by covering a mile in 1:30½ and a kilometer

in :42½. A Mors was second and a Darracq secured third prize.

A 5 kilometers standing start competition against time was on the program for the second day. Four Griffon motor cycles took the four first places in the heat reserved for this class. Griet made the fastest record, going the distance in 3:03½; Demeter, Lamberjack and Anzani followed. Bachel on a racer did much better than on the previous day and



MARCEL RENAULT

went over the route in 3:25½. In the voiturette class the Darracq driven by Villenain was first, its time being 3:15. Baras and Leconans seemed to prove that they were, in some things, inseparable, each covering the 5 kilometers in 2:53. Henriot in a Clement-Bayard was next. In the best for big cars Gabriel simply outclassed the field and covered the 3½ miles from a standing start in 2:36½, an average of nearly 75 miles an hour. Wagner, in the Darracq racer, was second in 2:40½; A. Clement in the Clement-Bayard third in 2:54½, and the three Serpollet steamers followed.

The event of the third day was a standing start kilometer on a hill with 4 per cent grade at the start and 10 per cent at the finish. The Baron de Caters cup contest, also run on the hill, but only over a distance of 500 meters and with a flying start, was also decided. In the first of these two events Becconais made the fastest time of the day, going the 1,000 meters up hill in :47½ in his light Darracq car, Lamberjack on the Griffon motor cycle made second best time, 50 seconds fast. Then came Henriot, Clement-Bayard, :52½; Baras, Darracq, :53; Wagner, Darracq, :53½; Villenain, Darracq, :53½; Gabriel, de Dietrich, :53½. The Serpollet touring cars were the fastest among the nine vehicles that competed in this class.

Henriot, in the Clement-Bayard light car, by going ½ of a second faster than Wagner, on a big Darracq car, won the Baron de Caters cup. His time for the 500 meters was 19 seconds, that of Wagner, :19½; Anzani on an Aleyon motor cycle was third in :19½, followed by Lamberjack on a Griffon motor cycle in :20½.

## HONOR MARCEL RENAULT

### Monument Unveiled and Mass Celebrated at Boulogne, France, May 26, by His Friends

Paris, May 27.—Simplicity and sincerity prevailed yesterday, when, during the forenoon, a mass was celebrated and in the afternoon the monument was unveiled at Billancourt, near Paris, in memory of Marcel Renault. Happening so soon after the Ardennes race, it is pleasing to be able to say that a great many friends who knew Marcel personally and some who simply were his friends on account of his great races, attended both ceremonies. There was but one deception and it was a keen one indeed, which was severely commented on, and may even lead to an interpolation in the chamber—the absence of a representative of the government. If any one deserved this honor, Marcel Renault was certainly that person, for he was one of the pioneers of the industry, a fact acknowledged all over the world.

When the monument was unveiled, at a late hour in the afternoon, most of the employes and workmen of the Renault factory, besides several hundred other people, were present. It might almost be said that all Billancourt was in mourning, for it was in Billancourt that Marcel was most of the time he lived and where he was brought up.

Henry Desgranges, editor of *l'Auto*, who started the subscription for the monument, made the first address and briefly recalled the racing career of Marcel. Mr. Mors, as representative of the automobile board of trade, was the second spokesman and recalled the business career and the loyalty of the deceased. The mayor of Boulogne spoke in the name of the municipality, partly as follows:

"Marcel Renault was a child of our town, where he was brought up and where he gathered his first ideas concerning the automobile. After having studied long and hard with his brothers the new method of transportation, he did not hesitate to give his native town the opportunity of profiting by his inventions and thus established his factory on its territory. The factory which we can see from here was established in 1898 and then comprised but a small building, which has grown every year since and now keeps busy more than 700 people, almost a little town in itself. Misfortune has deprived us of Marcel Renault, has deprived him from the affection of his people, his friends, his country. He died a victim of his own invention, as a martyr and for his country. The municipal council of Boulogne in placing this piece of ground at the disposal of the committee which took the initiative of erecting this monument in memory of Marcel Renault, has been happy in contributing in this way to perpetuate his memory."

The monument is as simple as was the man in whose honor it was made. On the front of the pedestal is a bronze plate showing the arrival of Marcel Renault on the Prater track, Vienna, at the time of the Paris-Vienna race. On the back of the stone is the following inscription: "May 26, 1904. This monument has been erected through subscription gotten up by the newspaper *l'Auto*, in memory of Marcel Renault, victim of an accident in the Paris-Madrid automobile road race, May 24, 1903."

# MOTOR AGE

Published Every Thursday by  
THE TRADE PRESS CO.

1303 MICHIGAN AVENUE, CHICAGO  
Telephone Calumet 7011

New York Office, 120 West 37th Street,  
London Office, American Publication Bu-  
reau, 31 Manor Park Rd., Harington, N.W.

MEMBER NATIONAL ASSOCIATION OF AUTOMOBILE MANUFACTURERS	MEMBER CHICAGO TRADE PRESS ASSOCIATION
--	---

Entered at the Chicago Post Office as Second Class  
Mail Matter

Subscription, Two Dollars per Year  
Foreign Subscription, Four Dollars

Any Newsdealer may obtain Motor Age through the  
Western News Co., Chicago, or any of its  
branches, on a removable basis.

## PASSENGER BUSES

**M**OTOR AGE frequently receives letters from persons in various sections of the country asking for information concerning gasoline passenger service cars of the omnibus or wagonette patterns.

There is a great demand for such vehicles, especially in the west for stage purposes.

It is a promising field that is almost untouched by manufacturers.

Automobile is fast reducing itself to a commercial basis. Cars for pleasure will always be used. Cars for business will also be used. The supply of the former is on close speaking terms with the demand. The supply of the latter in adaptable forms is not within hailing distance of the demand.

The persons who wish passenger service vehicles do not wish to bother buying suitable chassis with bodies made to order. They wish complete, specially built cars ready for the particular use to which they are to be put.

The field of the business automobile is limitless. Of all the hundreds of patterns of cars necessary to carry on the work of highway transportation by motor there is no pattern so sure of immediate success as the passenger service car.

Makers of gasoline automobiles would do well to investigate this field, with view to meeting its requirements in a practicable manner.

## GO TO ST. LOUIS

**T**HERE has been too many fizzes in this automobiling sport and pastime of ours—more than there has been occasion for during the last year.

No reasons or excuses are necessary. The fact exists.

The next great event in American automobiling is the tour to St. Louis. It must be a great event—not a great fizzle.

A lot of effort is being put into the preparatory work. All of the arrangements for this run will be excellently and comprehensively made.

Those who have the affair in charge are doing all they can do.

The advertisement of the tour through the automobile and lay press is being conscientiously and persistently carried on.

The routes to St. Louis from all points are being carefully and systematically studied and

laid out by experienced automobile tourists. The accommodations for the tourists and their cars are being arranged for in every detail.

All that can be done beforehand to make the tour a success is being done.

The outcome of the whole thing remains subject to the will of the individual automobilists.

It is up to the rank and file of American motoring to make the tour an eminent success.

The tour is a success by its numbers. All of the glorious arrangements possible cannot make a success out of a fizzle.

There can be no fizzle under any other circumstances than that by which American motorists lay down and do not participate in the run.

The managers of the affair can ably conduct it. They cannot fill the ranks from their own limited number.

This is an excellent occasion to combine a delightful vacation with an effort to show the extent and practicability of automobiling.

It must not fizzle.

MOTOR AGE respectfully asks the individual support of all its friends be granted this enterprise.

It is for the good of automobiling that a host of automobilists be gathered at the St. Louis world's fair August 10.

This thing can be made a howling jubilee. It can be made anything. It is a matter of co-operation of all the automobilists in the country.

Let these automobilists fix their affairs so that they can take part in the tour. If by so doing it is necessary to make the tour and a prospective vacation one and the same thing, all right. The tour will be of itself a delightful vacation.

All aboard for St. Louis.

When this tour starts let there be such a spattering of motors that the sound of it will be heard in every hamlet in the land.

## ROAD-BUILDING PROGRESS

**A**N INTERESTING monograph on the progress of road building in the middle west has been prepared for the department of agriculture by R. W. Richardson, special agent for the middle western division of the office of public road inquiries. In his introduction Mr. Richardson says that prior to the era of road building, which had its beginning in the decade following the close of the civil war, public road construction made the most progress in the states of the middle west. This was under the toll-road system, and several of the states bordering the Mississippi river still retain the old toll-road enactments upon their statute books. These roads linked together the principal towns and connected the shipping and commercial centers with the interior.

While the toll-road system, with few exceptions, has been abandoned, these roads still remain and are maintained and kept free for public travel out of the general road funds of the counties through which they pass.

There has been some further progress in road building in the counties containing important cities, and there are many substantial and beautiful stone and gravel roads leading to and from these centers. Some benefit has also been derived from grading, rolling and dragging the common earth roads; but, with

these exceptions, no general progress in permanent improvement has been made in the last half century.

It is frequently asserted that, since the era of railway development, the railroad has assumed, to a greater and greater degree, the functions of the common road, and that the construction and extension of improved highways are no longer necessary, nor are they an indication of progress. This is true to a limited extent—railroads can never supersede the common roads.

The extension of the free delivery of rural mails and the rapid development of motor vehicles are potent influences in advancing the era of highway improvement in these states. It is hardly necessary to dwell upon the effect of rural mail delivery extension in creating the necessity for better roads.

The great motor vehicle interests are now beginning to direct their attention to the necessity of improved roads.

It can hardly be explained why these people, alert in business and devoting their energies to the perfection of the motor vehicle, should have so long taxed their ingenuity to construct a machine which will resist the strain of grades, rocks, ruts, mud and all kinds of miserable road conditions, and devoted so little of their time and effort to improving the conditions primarily essential to the success of this mode of transportation.

Other forces are hastening to the period of highway betterment. Business men are learning by experience that improved highways are primarily essential to uninterrupted trade and to their commercial prosperity. Their organizations are giving active consideration to the problem of building durable public roads leading to and from the trading centers of their respective communities.

In short, commercial and industrial interests are generally awakening to the necessity of their co-operation in hastening the era of road building.

The stimulus which the motor industry can give this united effort is probably greater than the trade realizes. It is the co-operation of the one industry which will eventually produce the bulk of the highway vehicles. It is a permanent co-operation.

## A BLESSING IN DISGUISE

**J**ERSEY justice is about on a par with that dished out in Kansas and other localities. If there is such a thing as "the limit" it is fixing a man on "general principles" when the court admits there is no case against the prisoner.

Still, when one stops to consider the case and its effects, it will be found that this Jersey case will be the beginning of the end of the injustice that has for some years been heaped upon the shoulders of automobilists.

If the automobile owners of the east will take the trouble to wage a relentless war on the prejudiced and incapable justice guilty of the act charged, as reported elsewhere, it will not only have a salutary effect upon this particular administrator of law, but upon others of his class who are apt to have similar notions in their heads.

In days past a wheelman was subjected to about all the annoyance and injustice that could be imagined, and when the motorist took his place in the public's attention, blind justice again started a crusade.

To overdo a thing is to kill it; in this case it is a blessing.

# JUMP SPARKS



Almost time for the A. C. A. to change its name.

☞

The public has accepted the automobile. News paper jokers have begun to call them "cars" instead of "autos."

☞

General Nelson A. Miles thinks motor cars will supersede cavalry horses in the army. General Miles is no fool.

☞

A Chicago cyclist recently ran into an automobile that was standing still. What a shame the car was not moving at least 2 miles an hour.

☞

The honor paid to the memory of Marcel Renault at the unveiling of a statue in France is touching. What American will ever have such attention?

☞

The latest thing in automobiling is to use the pastime as means of rocking babies to sleep. This fits in with the anti-race-aside movement.

☞

Have your speed limits raised by taking the aldermen and city officials out for a 6-mile-an-hour ride and then whoop it up just to show them the difference.

☞

Some people cry before they are hurt, as, for instance, the Bostonians who are stirred up about the attitude of the N. A. A. M. on the matter of local shows.

☞

The A. I. A. M. has the Selden patent, but the N. A. A. M. has the show situation pretty well in hand. Which is the better business proposition is an open question.

☞

The California chauffeur who took Willie K. out in a touring car and hit it up a little just to scare the young millionaire, must have had a feeling of goodness when presented with the mile record-holder's card. Yet, he perhaps learned a lesson.

☞

Judging from reports from the second and third-class cities that have held automobile parades, the recent affair in Chicago was taken as a standard. At any rate, the said reports hinted that the local parades were "better than Chicago's at any rate."

For real suburban bullheadedness the following from the Democrat, of Hamilton, O., is the limit: "R. V. M. hits the mark squarely when he says: 'The automobile is a nuisance on our public roads. We are not building roads for automobiles and never will get "good roads" if they continue to use our roads the way they do. Every once in a while we hear of runaway accidents. I would sooner meet the ——— than an automobile. When the roads are muddy these things cannot use the roads, and when we have some hauling to do, we are sometimes glad that the roads are bad, because then we are sure we will not come in contact with them.'" Perhaps R. V. M. knows what he is talking about when he speaks of the effect on one's nerves of meeting "the ———."

☞

Hints to Salesmen—No. 1—Just before showing the customer how the motor starts on the first turn, see that the switch is off. Then crank for dear life for several minutes and in simulated surprise discover that the current has not been turned on. In the process you will have filled the combustion chamber and insured the success of your demonstration.

☞

This is good—it is from Milwaukee: "The automobile has many advantages over the horse: Their owners can not be arrested for abusing them; they don't have to have their tails cut off, to be stylish; the only animals to get hurt are those in front of them."

☞

An unfeeling man wrote to a manufacturer as follows: "I notice your catalogue lays great stress on the governor with which your car is fitted. I have one of these cars. What it needs is an accelerator, not a governor."

☞

A San Francisco ordinance provides that automobiles must not be rented for more than \$2.50 an hour. This is as bad for the cabbies as it is for automobile liveries.

☞

Even from St. Joseph, Mo., comes a protest against the metropolitan habit of egging and -tonging automobilists. It certainly puts New York in a delightful position to be roasted by Missouri!

☞

Some women are motor cars without mufflers.

Look for the special international cup race story in the issue of June 23.

☞

Parades are popular. It is rumored that they will be continued throughout the race meet season.

☞

A man who cannot think up a good excuse for being beaten in an international cup race is but a novice in competitive sports.

☞

At Spartanburg, S. C., a mule has been scared into running by an automobile. At last the South Carolina mule has been awakened.

☞

The Democrat, of Mount Carroll, Ill., bewails the fact that the town is not enterprising enough to get some automobiles wherewith to start an anti-motoring war.

☞

The Automobile Club of Great Britain and Ireland is out to stop searching. There is no need to stop an anti-searching crusade in this country. Our roads are the best protection.

☞

The Star, of Elmira, N. Y., is worrying whether an automobile should be called he or she. Once in a while one is found that is called by a name that would not look well in type.

☞

"William Kruse has a new auto and now rides around town without the aid of a horse," says the Record, of Moqueta, Iowa. Is this slandering on his old automobile or "loose" English?

☞

A Missouri paper asserts that any woman who becomes a chauffee steps out of her sphere. Surely. Anybody guilty of adopting such an intolerable name as chauffee steps out of her sphere.

☞

People who think the trying of the Selden patent cases in court is a slow process are reminded that it took almost a score of years of hard work to get the patent issued. It would not be consistent to hurry matters now.

☞

All who say they are going on the St. Louis tour actually make the journey, or even start, what a mighty motor-puffing, grease-dropping, mud-splashing, chauffeur-swearng caravan it will be! And what will St. Louis do with all the people and their machines?



# A PARADE WITH A LESSON



**L**OS ANGELES, CAL., June 2.—The parade here was gotten up in less than a week, and yet over 200 automobiles were in line—that beats Buffalo and New York and most everywhere else.

The parade was in charge of the Automobile Club of Southern California and all the trade and the Los Angeles and Pasadena automobile clubs did all they could to aid the management. The line was formed on South Broadway, as was the good roads parade of the Saturday before, with front of line at Seventh street. This gave the White garage at that point and Cowan's big establishment two blocks farther south, a chance to aid considerably in the organization of the line, which was 2 miles long.

The parade was led by a platoon of police on bicycles, and the first car was a Tourist, which is made in this city. Mrs. H. L. Percy managed this car and had three lady friends and her husband as passengers, all garbed in white. The next car was that of President Milbank Johnson, who had as guests Mayor Snyder, of this city, and Mayor Vedder and Chief of Police Freeman, of Pasadena. The rest of the first division followed behind two Waverley tallies, which held the band.

There were three Stearns, three Peerless, several Tourists, two Packards and ten Wintons in the first division, which was in charge of President Johnson. The second division was made up of sixteen White touring cars, in charge of Frank A. Garbutt. The third division was composed of twenty-four Stevens-Duryeas, fourteen Autocars, ten St. Louis, and a score of old cars made up of the White, General, Dumont, Knox, Haynes-Apperson, etc.

The electricians made one division, with a dozen Waverleys and runabouts, this division being in charge of Archie Thompson.

C. W. West was in charge of the commercial automobile division, which was, strange to say, the shortest division in the parade. It was composed of four electric delivery wagons, a pair of Knox deliveries, a Cadillac and several other light craft.

As usual, the Oldsmobiles were the most plentiful, there being twenty-five in line, all private cars. This was the only make in line without a number of new cars taken out of stock for the parade.

The Stevens-Duryea people very kindly put in to swell the parade nearly a dozen new cars. At the start 190 cars were in line, and the late comers dropped in after the start, making 203 in all.

The seventy-eight cars were made up as follows: Wintons, ten; Stearns, three; Packard,

five; Peerless, four; Knox, three; Toledo, four; Thomas, three; General, three; Autocar, twelve; White, sixteen; Tourists, nine; St. Louis, two; Dumont, one; Pierce Arrow, one.

At least seventy-six cars were furnished by local dealers, all the rest were cars of private owners. This is a remarkable showing for a city of this size and especially with only a week to get up the parade.

The object of the parade was to show the public and the city officials just how slow 8 miles an hour is and how unfair the city ordinance is to automobile users. At present the law here at Pasadena and in most of the cities in southern California reads, 4 miles an hour on crossings and passing street cars, 6 miles an hour in the business center, and 8 miles an hour in the residential portion. After the speed and stopping exhibitions the mayor and chief of police said they thought that 20 or 25 miles an hour everywhere but in business streets was slow enough speed limit and 10 or 12 miles in center of town. It is quite probable that these changes will be made.

After the 10 mile parade through business and well reserved portion was over, stopping and various speeds were illustrated by Frank A. Garbutt, Dr. Johnson and Willard Stinson, the latter sending his Stearns touring car along lower Main street at a speed of 40 miles an hour with Aldermen Summerland and Skillings as his passengers.

For the past 2 months the automobile users of this city have regularly been held up by the police until the matter was becoming serious. First it was on the old horse-hitching ordinance, which allowed a stop of only 20 minutes. Fifty were fined the first day the hitching ordinance was enforced and the automobile public arose in arms. The ordinance now reads 45 minutes.

Probably 250 arrests have been made under the 8 mile ordinance. The usual fine was \$10 and no mercy was shown. Those who objected to the high-handed robbery got still higher fines, some having to pay \$50 for objecting. The general opinion was that the city officials needed the money.

Another extortion was on both the county and city taxes. The assessors out here had to make the assessment and collect on the spot. City taxes are \$1.40 on the hundred and state and county is \$1.20 on the hundred. Both sets of deputies were instructed to assess half on the original retail price of each automobile, and out here that means the freight added.

## BOSTONIANS DISAPPOINTED

Boston, June 4.—It was again found necessary to postpone the races of the Massachusetts Automobile Club, which had been carried over from Monday until today. During the entire week the rain came down in torrents, fairly deluging the track, which has a clay surface, and putting it in such a condition that in the opinion of the track manager it would not be safe for automobile racing until Wednesday next at the earliest. Consequently the events were postponed until next Saturday, much to the disappointment of the contestants and the prospective spectators. This second postponement may cause a loss of one or two of the entries.

No sooner did Oldfield hear of this second postponement than he shipped himself and Bullet II to Cleveland, as Wednesday Mr. Winton is to drive the big machine at a charity race meet. It is possible, however, that the

machine will be back in Boston in season to compete.

This afternoon while Horace Hille was tuning up his Georges Richard-Brazier, the crank shaft snapped, and along with it went several other important portions of the mechanism, so that this car is out of the running. This is a big disappointment. Another car that is out is Brokaw's Renault. When bringing that machine to Boston over the roads Bernin, its up-mover, knocked down a boy in Brockton, and on Wednesday he paid a fine, and then was presented with papers in a civil suit for \$5,000 damages. Bernin took the poor doctor's oath and escaped prosecution on that charge. The wily attorney representing the boy, however, had another card up his sleeve. He had prepared papers for a \$10,000 suit against Mr. Brokaw, and when he came to find him and the car, in order to serve the papers and place an attachment on the vehicle, both had left the city and state. Consequently there is reason to believe that the Brokaw car will not compete. Since the first postponement two additional entries have been received; one from Joe Tracey, who has gotten the Peerless Gordon Bennett car of a year ago in shape again, and one from Chairman William Wallace, who, on Friday, received his Renault car from France.

## HITCH IN MERGER PLANS

New York, June 8.—The directors of the American Automobile Association met yesterday to discuss the report of the committee on constitution of the American Motor Association. A hitch developed, and as a result the discussion was postponed until the next meeting.

It is reported that the A. A. insists upon club representatives casting the full club vote at national assemblies but denying proxies to individual delegates, confining their votes to those actually present. Notwithstanding the fact that there was practically a unanimous vote in favor of the merger, there is danger that the A. A. directors will defeat the merger unless Messrs. Scarritt, Farson, Potter and Whipple, the original conferees, can restore harmony and bring about the adoption of the constitution in a mutually satisfactory manner.

## POST'S JOURNEY LND

Augustus Post, who has been covering the route of the St. Louis tour of the American Automobile Association, has just completed the run. Details of his experiences have been given as far as Indianapolis. From that point on his itinerary was laid out along the national highway to Philadelphia and thence to New York city. Mr. Post remained 2 days in Indianapolis as a guest of the Automobile Club of Indiana.

Mr. Post left Indianapolis on Thursday, May 26, escorted by Mr. Varney as pilot and in company with M. C. Healey. He arrived at Dayton in the evening and remained there over night. At 10 o'clock next morning, in company with C. L. Bauman, he left Dayton, arriving at Springfield at 11 o'clock, where he was joined by C. M. Bramwell, the committeeman for that city. After a conference with Mr. Bramwell and lunch at Springfield, he pushed through to Columbus, arriving there at 3 o'clock in the afternoon, being received by a delegation of automobilists in charge of Mr. Monypeny. Mr. Post remained there during the night and had conferences with Mr. Monypeny and others in

terested in the tour. He arrived at Wheeling, W. Va., on the afternoon of the 28th and spent a portion of the 29th in Cumberland. On the 31st Mr. Post was in Philadelphia.

Reports made along the line show that between twenty-five and thirty will go from Dayton with the tour; between fifteen and twenty from Columbus; about ten from Springfield, and nearly fifty from Indianapolis.

F. A. Garbutt, chairman of the Pacific coast committee, has written saying that there is much interest in the tour shown in California and this in spite of the fact that all those who may participate will ship their cars to Denver and tour from that point. Mr. Garbutt has thoroughly canvassed the Automobile Club of Southern California and has also been in correspondence with the Automobile Club of California at San Francisco.

### MEET FOR ST. LOUIS

St. Louis, Mo., June 6—There will probably be automobile races here during the World's fair, for George B. Sidener has secured from the American Automobile Association a sanction to hold a meeting August 21 at the St. Louis Fair grounds track. The program and prize list as outlined is as follows:

Five-mile race for vehicles weighing 881 to 1,432 pounds; prize, the Mississippi Valley cup, valued at \$100.

Five-mile race for vehicles weighing 551 to 881 pounds; prize, the press cup, valued at \$100.

Five-mile race, for vehicles weighing 1,432 to 2,204 pounds; prize, the Mound City cup, valued at \$100.

Five-mile race, for vehicles weighing 551 to 881 pounds; prize, the Jeffersonian cup, valued at \$100.

Ten-mile race for vehicles weighing 1,432 to 2,204 pounds; first prize, the Louisiana Purchase Exposition trophy, valued at \$500; second prize, cup valued at \$100.

Twenty-five-mile race, open to all classes weighing 881 to 1,432 pounds; prizes valued at \$100 to the first at the end of each mile, and the Missouri cup, valued at \$100, to the winner.

Pursuit race, open to all classes weighing 1,432 to 2,204 pounds; cup, the Greyhound Stakes, valued at \$100.

### TOO FAST FOR WILLIE K.

San Francisco, Cal., June 3—A good story is going the rounds about William K. Vanderbilt, Jr., who, during his stay in this city, was furnished with a Winton touring car by the Scott Blakelee Automobile Livery. Mr. Vanderbilt, being a quiet and unassuming young man, the driver of the motor car, not knowing who he was and wishing to please, thought to do so by giving him a fast ride. The chauffeur therefore speeded the machine up a little, whereupon he was told to drive slower, there being no need of hurrying so. Again during the afternoon the chauffeur thought to get into the good graces of the millionaire by giving him another fast ride. Again he was told by the occupant of the vehicle to take it easier. At the termination of the ride the driver asked the gentleman if he was timid about fast riding and the reply was: "Yes, very much afraid, as I am not accustomed to riding in automobiles." In saying this, Mr. Vanderbilt handed the driver his card and when the latter read the name he gasped; then he excused himself for his several attempts to "hit her up."

## VANDERBILT CUP RULES

### Race Will Be Open to the World but Will Be Held on American Soil 2 Years—Race Talk

New York, June 8—At the conference to make rules for the Vanderbilt cup race, a new international team race was created. The race is to be contested on American soil the first 2 years, the first event to be held October 8 next.

The American entries are limited to ten and must be made through a club a member of the A. A. A. while the foreign entries must be made through some club affiliated with the Automobile Club of France. The entry fee is to be \$300, half of which will be returned if the entrant starts. This year the entries will close September 8 and afterwards on March 15, the race to be run between August 15 and October 15 over a distance of from 250 to 300 miles. The Gordon Bennett race weight limitations will govern.

The board of managing commissioners must contain Mr. Vanderbilt, one member of the racing board of the A. A. A., and one member of the sports committee of the French club, while the last named will later be regarded as representing the American board.

After 2 years the winning club will name the course, subject to the approval or veto of the American board, and will also manage the race details. When the race is run in America the A. A. A. will secure the course permits, pay all expenses, and decide the order of awards; when run abroad the French club will handle it under the same conditions.

The winning club will have the local management. The start will have 60-second intervals, the order to be determined by lot, and the car making the fastest time will be the winner.

American rules will prevail when the race is run in this country and French rules when it is run abroad. The starting time begins the moment a car is scheduled to start. The race is to be entirely over roads of general use, no part of a track to be utilized. The trophy, to be known as the "William K. Vanderbilt, Jr., Cup," has been completed by Tiffany and is reported to be more costly than that donated by James Gordon Bennett for the international race. The idea of the donor was to make it a distinctively American cup, with the American board always participating in the management of the race.

The Long Island course will probably be inspected by Messrs. Vanderbilt and Pardonington immediately who will make announcement of its availability soon.

Report has it that it is pretty well assured that there will be a straightaway race meet promoted at Old Orchard beach in July, the programme to be made up of the mile and 2-mile dashes, possible over the 3-mile course available. Senator Morgan, who has returned from an inspection of the beach, says that while it will not compare with Ormond in length it is a very smooth and hard stretch of sand well able to produce fast going.

It is expected that Senator Morgan will soon announce the dates and details of the great 5-mile hill-climb he is to promote up Mount Washington this summer.

Harry Harkness, who designed and built the racer for last year's American cup race team, that didn't race, has just received a 60-horse-

power Mercedes, which it is inferred as a matter of course that he will race at some of the track meets.

William Wallace, chairman of the Massachusetts Automobile Club race meet committee, and also a member of the national racing board, has ordered a 60-horsepower Napier racer. This will probably be the first Napier to be raced on an American track.

### HILL-CLIMB POSTPONED

Minneapolis, Minn., June 6—A solid week of wretched weather has put the automobilists here to the bad, and this, with the failure of the park board to grant permission for the use of Kenwood parkway hill, has caused the Minneapolis Automobile Club to postpone its hill-climbing contest to next Saturday, June 11. The original plan, of classifying the machines according to power, has been changed. There will be six classes under the new arrangement, as follows:

First class, with tonneau on—Automobiles the catalogue prices of which are in excess of \$2,750.

Second class, with tonneau on—Automobiles the catalogue prices of which are in excess of \$1,750 and less than \$2,750.

Third class, without tonneau—Automobiles the catalogue prices of which are in excess of \$1,000 and not over \$1,750.

Fourth class, without tonneau—Automobiles the catalogue prices of which are \$750 and not exceeding \$1,000.

Fifth class, without tonneau—Automobiles costing, per catalogue, less than \$750. Steam machines barred out of this class.

Sixth class—Open class for all makes or priced machines, no limits as to stripping of machines, but machines must be operated by owners only.

### IN THE HEART OF MARYLAND

The annual meet of the Federation of American Motorcyclists occurs at Cambridge, Md., July 8 and 9. This meet terminates a tour to the rendezvous from New York, the metropolitan party leaving July 5. However, motor cyclists from all over the country are invited and expected, and it is hoped to make this meet the inaugural one of a series that may eventually have the prominence of some of the famous old L. A. W. meets. It is a good chance to enjoy a delightful vacation in hospitable Maryland.

### HOODLUMS IN FRANCE

Some of the French manufacturers and drivers who were directly interested in the Ardennes race are now anxious to find the fellows who threw a lot of big nails and horse shoes over the course the day before the race. Mr. Brazier, of the Georges Richard Brazier company, Stead, and Achille Fournier each had three punctures within 2 miles near Quatre-Champs. As soon as the information was received by the officials, orders were given over the telephone to each control to arrange that the entire route be inspected before the race, which was done.

### MEET FOR MANHATTAN

New York, June 7—It is more than probable that the Empire City track management will yield to the demand for a meet before next autumn and run one before the trotting races, which it is promoting in August. The date being considered is July 16.

### RAIN AT CLEVELAND

Cleveland, O., June 8—"No game; giving out rain checks" tells the story of the parade and race meet of the Cleveland Day Nursery and Free Kindergarten Association scheduled for today. The future date has not been set.



# MOTORIZING IN FAR HAWAII

**H**ONOLULU, H. I., May 15.—Smooth and hard macadam roads, stretching away through parks and over mountains, bordered with palms, cocoanuts and ironwoods, fringed with rice, taro, cane and coffee, are among the attractions, material attractions, offered by Hawaii to the devotee of automobilism.

From the very first the motor carriage has appeared not alone to Hawaii but to visitors to these sunset isles. The first types of runabouts were used on the roads and with their passing the modern high-powered vehicles have grown in public favor. So strong has been the liking for the power-driven carriage that now all of the standard makes, especially those which are of the simpler type, are to be seen around Honolulu, the capital city, and on the road to Oahu, the best known island of the group.

An unfortunate experience with electric machines gave a bad taste a half decade ago, but the trustworthiness of the steam and gasoline machines has won for them a substantial following, and now it is quite common to see men going to their business and leaving the automobile to be looked after during their work hours. The whirl over 2 or 3 miles of highway to luncheon and back again forms a pleasant break in the work day. From orders now in the hands of makers there is every reason to believe that very shortly there will be a material increase in the number, as well as advance in the size and power of the vehicles of the midsea capital.

To the visitor the self-powered vehicle opens a field for enjoyment. If there has been one fad or one extravagance, throughout the history of these tropical islands, whether they were ruled by a king or the people directly, it has been toward the first class highways. There are now about 100 miles of macadam highway on the four principal islands of the group. On Oahu, the island best known by reason of the fact that it is central and has the capital city, Honolulu, one may go from end to end and strike not more than 2 or 3 miles of road that may be called bad. This would consist of a stretch right along the beach on the northern side, where the sea at high-tide and before a strong trade wind, is dashed against a forbidding cliff. But the drive or ride losing nothing by reason of the proximity of mountain and sea, and altogether the wrong

road, is one full of surprises and exceeding beauty.

Around Honolulu there are many drives of very great attractiveness. Of these first in its beauty is that which leads from the city 5 miles to the south and east, past the Waikiki beach, the favorite resort of bathers, through Kapiolani park, around Diamond Head, a taffer cone, and back into the park by a drive which gives new vistas and pleasing color effects from the backbone ridge of mountains which lie 2 miles away.

Perhaps no city in the world has within 5 miles of its business center such a remarkable piece of scenery as the Nuuanu Pali. At this pass is the backbone ridge, not more than a hundred yards in width originally, where the gently sloping valley from the south culminated in a sheer precipice of close to 1,000 feet in height until a new roadway was hewn out of the face of the mountain within a decade, was won the sovereignty of the group more than a hundred years ago. When Kamelameha won, rested the supremacy upon the king of Oahu, it was only after a decisive battle, and the victors drove over this cliff or pali thousands of their opponents, whose bones, bleached in the sun and rains, are still found amid the rank tropical growths. The ascent of the Nuuanu valley to the summit of the pass is in itself a drive of great beauty. For 5 miles the road winds between rows of suburban residences, flower gar-

dens, and attractive bungalows, finally reaching a height of 1,000 feet above the sea, the maximum grade passed being 5 per cent. The view through the gap in the hills, which rise 1,500 feet on either side, is one of surpassing beauty, and no one who has taken this drive has ever been known to express regret. The highway is an easy one for the power machine, because at no point is there other than a smooth, well-built road.

Returning to Honolulu one has 20 miles of plateau, a natural pass between two parallel mountain ranges, where kaleidoscope changes are constantly recurring. The country is of the farming type, while over vast areas range live stock, the road being buried by long runs at low gradient and one or two sharp drops into gulches which extend to the top of the mountains, and through which new roads are now being built, with an average gradient of about 5 per cent and a maximum of 8 per cent. Then 15 miles through cane fields around the shores of sparkling Pearl harbor, through the beauties of Moanalua, one winds his way to the city.

Around Honolulu proper, however, there are scores of short runs into cup-shaped valleys, through rich estates, up mountains and along seaside highways, until it would seem that every phase of fascinating scenery has been exploited.

On the island of Hawaii, the largest of the group, is the greatest living volcano of the day, Kilauea. Stretching from the port of Hilo,

the most commonly used by volcano visitors, is a high class road, 31 miles long to the Volcano house. This highway is unique in that there is afforded along it views of the most complex nature. To the northward at all times is the mountain Mauna Loa, 13,800 feet, and further away Mauna Kea, 14,000 feet, said to be the highest island mountain in the world. The road cuts a tropical jungle much of the way, the villas vine-clad and rose-embowered, and finally comes out of the timber upon a plateau, where the lava has not disintegrated and the surface of the flow is still unbroken.

From the Volcano house, which is 4,000 feet up, the road drops to sea level on the south side in 30 miles again. This reconstructed boulevard is of first class, smooth macadam surface with staunch bridge, is as finely kept as the Riverside drive, and the risk being a species of emery, there is little wash. The road is con-

C. A. COWAN AND PARTY—R. N. HALLSTED, THE PIONEER



A TYPICAL HONOLULU AUTOMOBILING ROAD

stably in repair. For 200 miles around the southern and western ends of the island there is a road which is easily of the very highest class, except for 15 miles, where the surface of the lava has not disintegrated and the road is rough and broken. Through the coffee and the fern forests the road runs across lava flows which have

## NEARING

It is a pleasure to tour around the country in an automobile when the weather is pleasant and the roads in excellent condition, but when it rains—well, some people may enjoy it even then. It was raining when we left New York; it was raining when we crossed the Catskills; and it rained when we passed through Rochester, Batavia and Buffalo.

When it rains a leather suit, topped off by a rubber coat, is pretty good protection. The coat, if it buttons, however, will admit moisture which has no unpleasant faculty of running down the legs of your knickerbockers, under your leggings and into your shoes, reminding a fellow of the day when he went fishing when a youth.

The car in which we left New York city is now a sight, besplashed with mud until the enamel is entirely obliterated, except in places where the rain has conquered the mud and a bit of blue shows through the storm. Luckily we took the precaution to strap a substantial canvas apron underneath the machinery, or that part of the car would be so clogged as to make running on anything like our own power out of question.

All riders of bicycles in the good old days of the L. A. W. and the 42-pound racer remember their first experience with road hogs. By this term is meant the man who drives a horse because his father did and clings to the idea that as the driver of a horse he has a right to the road, the whole road and nothing but the road, unless there be a cycle path running parallel, when he will generally insist upon one wheel of his vehicle rolling along on that. From New York city across the Catskills and on into Batavia we never met an individual that could be thus styled, but just west of Corfu he was encountered, and all bear the scratches of that encounter.

It was while trying to make a 10-per cent grade on high gear that we saw ahead a man driving a horse. We had overtaken and passed hundreds of such equipments on our 410-mile run and we thought nothing of it. When we had come within hailing distance we sounded our horn and the driver looked around and saw us coming. We didn't want the whole road, nor even half, but we did want to get by without having to change gears. We begged, but no attention from the man behind the horse until we were 10 feet behind him, then he stopped and commenced to back.

Yes, we hit him; who could have helped it!



IN MONROE COUNTY, NEW YORK: ROADSIDE CHAIN REPAIR

But we didn't hit him hard, nor did we slamage his vehicle or the car. In a frenzy he jumped to the ground, and, rushing behind the car, yelled out our number—as though we didn't know what number our car bore—and then he commenced. Well, we've heard swearing, but he had them all stopped and beaten to a stand still. We were called everything that was supposed to be bad in or below the earth. Finally we asked him if he would drive one side and allow us to go past. Not he. When patience ceased to be a virtue two of the party clambered out; one kept between the irate road hog and his vehicle, while the other led his horse one side and the car picked us up as it went past, leaving the now furious teamster threatening us with dire calamities from the hands of justice.

Our first break occurred last Friday as we were running between Batavia and Buffalo. Our chain allowed to become too slack, jumped one of the sprockets, caught in the brake hands and our rear wheel slid. The sensation was so similar to the breaking of a bicycle chain and the subsequent sliding of the rear wheel that we knew in a moment what had happened and wondered what havoc the snapped chain had caused to the engine. Our load was soon emptied in the street, the flooring of the tonneau taken out and a new chain substituted.

While at work on the chain, Harry Strong, formerly an eastern Pennsylvania amateur bicycle rider, came along driving a Pope-Toleolo car of Curtis Maltby of Corning. The one-time cyclist is now a full-fledged chauffeur. Strong volunteered his assistance but matters as we are we had no difficulty in adjusting matters so that we were soon under way again.

Taking for granted that the reader is either an automobilist or a person very much interested in automobilism, I would like to ask him

**EDITOR'S NOTE.** This is the third of a series of articles by W. S. Harrison, concerning a trip from New York to St. Louis over the proposed world's fair tour route.

fantastic formations and finally around the base of the great mountain, whose bulk from the sea seems greater than any peak known as seen from land.

To encompass the beauties of the various islands needs some little care, but when accomplished the journeys have been more than worth while.

## CHICAGO

a question: Did you ever fill your gasoline tank with kerosene by mistake or did you ever purchase extra fine gasoline under the supposition that you were getting 76 and have it turn out to be common coal oil?

Well, that was our exact experience very soon after our leaving Buffalo. We ran short of gasoline in our main tank and running up before a country store went in and inquired whether gasoline was kept. Upon being assured that the proprietor kept the best 76 gasoline he could get and sold barrels of it to automobilists, we purchased 6 gallons, our main tank capacity, and continued on our course. After covering about 4 miles and getting miles from anywhere, the engine suddenly stopped. We found our ignition excellent, and when we had thought of everything else, we looked at our 76 gasoline. In fact, we poured a little in the road and some 10 minutes later found it still there, no evaporation taking place.

There was only one course to take and we opened the cock and allowed that \$1.20 worth of "gasoline" to run out on the country road. Yes, we hated to do it, but we heard that oil was sometimes used in road-making and we thought we would give it a trial. It took nearly half an hour to run out, after which we fished out our emergency tank, which holds about 2 gallons, and had been strapped under one of the tonneau seats ever since leaving New York city, and poured its precious contents into the main tank, after which we had no trouble in starting up again and were soon howling along toward Erie.

An amusing incident happened while we were allowing the kerosene to slowly run out of the tank. A farmer came along driving a handsome team of bays, which showed more or less nervousness as they approached the Pathfinder. As the farmer eventually passed us he turned in his seat and said: "Thank you very much, boys; you are the first automobilists I have met in some time who were kind enough to stop their machine when they saw me coming and allow me to drive past without starting up again." Had he seen us still standing in the same spot some 20 minutes later he might have retraced his words of thanks. But then it does not pay to look too closely into a man's motives for being decent.

## ON GENERAL PRINCIPLES

### A New Jersey Justice Fines John A. Hill on These Grounds and Is in Trouble Over the Case

New York, June 5.—Wholesale and indiscriminate arrests of automobilists having occasion to tour through the Jersey hill towns of Madison and Chatham, against which the New Jersey Automobile and Motor Club sent out its warning circular recently, have culminated in so flagrant an outrage at Chatham last week on John A. Hill, chairman of the A. C. A. contest committee, who had as his companion Winthrop E. Scarrett, president of the club, that the former has taken the matter to the courts by bringing legal action against both Marshal Coon, who made the unwarrantable arrest, and Justice Ferris, who imposed a fine "on general principles," confessedly unsupported by positive evidence.

Mr. Hill was driving his car slowly down a decline when the arrest was made. Taken before the justice the marshal declared that his watch showed that the distance was traveled in 45 seconds.

"That would not be in excess of the speed limit," interposed the judge.

"Well, I'm not sure my watch was right," said the marshal, crawlingly, "but I know he was going faster than the limit."

"I am sure I was not going over 7½ miles an hour," said Mr. Hill. "How do I know it? Well, your honor, I drove a locomotive for over 10 years and should be a good judge of pace from that even if I had not been driving an automobile for several years."

"The evidence in this case," said the learned judge in summing up, "leaves it a matter of considerable doubt whether the defendant was or was not exceeding the speed limit. Still, I wish to break up this automobile racing around here and on general principles I'll fine you \$5 and costs."

The costs in these cases, it may be remarked, are divided between the justice and the informer. They are insignificant, but the aggregate, in view of the wholesale number of recent arrests, is considerable.

This time, though, the hayseed Solomon had caught a Tartar. Mr. Hill had no idea of submitting to arrest and paying even a \$5 fine "on general principles," so he at once went and sued out a writ of *certiorari* to compel the judge to appear before the Supreme court for a review of his action. At the same time he began suit for damages against the marshal for assault and false arrest. Mr. Hill's action has aroused universal commendation, which will doubtless compel the Morris county administrators of the law to get a little slow to future in arresting and fining automobilists "on general principles." It is also to be hoped that other automobilists may be induced for the good of the cause not to submit to unjust arrests and fines, however insignificant, rather than take the trouble to put up a fight.

President Semritt, who is backing Mr. Hill in his fight in behalf of the club, has issued the following statement in regard to this case and the whole matter of persecution by hasty officials:

"On behalf of automobilists generally, I wish to make our position clear. First of all, we are not disregarding of the rights of

other users of the highway. We desire to obey the laws of our state; not only in their letter, but in their spirit. But in our willingness to obey the laws, we do not propose to abrogate our common rights on the highway or submit to outrage and persecution by that class of petty and ignorant village officials, who either do not know the law which they profess to enforce, or, if they do know it, become criminals in undertaking to enforce it in an illegal manner. There is an old adage, 'Set a thief to catch a thief.' But these modern motorphobics set a criminal to catch an honest man, and do it under cover of law, protected, they think, by their petty official position. The fate of these gentlemen may be not unlike that of the ostrich, who imagines himself concealed because his head is hidden in the sand.

"We have certain rights. Henceforth, we propose to stand up and be counted among those who maintain their rights. We do not propose to apologize because we are on earth. We do not even propose to apologize because we use an automobile. We have the right to walk or crawl, or fly or swim, or be dragged about by a horse—or, as we prefer, go by the safer way of an automobile. We ask no man's permission, be he great or small.

"We propose to obey the law, to resist persecution, to protect our own interests and to be careful and considerate of the rights of other users of the highway. We will do no less than this. More we cannot do."

### SCRIBER TELLS HIS STORY

The navy department at Washington has received a report from Lieutenant Commander Scriber of his automobile accident which resulted in the death of a child in Boston Memorial day. He says he was proceeding slowly and cautiously, but that the little girl became frightened "and dashed back to the curbstone so quickly that there was not sufficient time to stop before my car struck her. After the accident I remained on the spot about 20 minutes with one of my sons, and wrote my name and address in the official record book of the street car conductor. Fearing the scene that might be made in the presence of my wife, I ordered my oldest son to proceed along the street about a mile and wait for me. This gave rise to a rumor that I had run away." Counsel for Commander Scriber secured a postponement of the case in court to June 20.

### HONEYMOON IN AN AUTOMOBILE

His any tourist sees a pretty bride couple in central New York on the way to St. Louis! Miss Louise W. Atwell and Paul H. Quackenbush were married at Utica Saturday, May 28. While their friends were waiting to storm them with rice when they took the 2:28 train out of Utica they were in their automobile speeding over the country roads in the beautiful valleys of central New York. The bride is a Syracuse girl and was a social favorite there. Roy Atwell, who appeared with Marie Cahill in "Nancy Brown" last winter, is her brother.

### MOTORING COLLEGIANS

As an evidence of the growing popularity of the motor cycle in France, forty college boys took part in the motor cycle championship reserved to college students of Paris. The distance was 5 kilometers and the winner, P. Mazurki, of Condorcet college, covered the distance in 5:20 on a 2½ horsepower Griffon.

## NO RECKLESS DRIVING

### "Thou Shalt Not Scorch" a Commandment of the Automobile Club of Great Britain

London, May 25.—The Automobile Club of Great Britain and Ireland is determined to do all it can to make automobilists a class of most gentlemanly road users, and to this end has, through its executive committee, made a public declaration to the effect that it not only discourages all forms of reckless driving, but will make such driving on the part of club members a misdemeanor punishable by expulsion from the club. The published statement of the executive committee:

The committee is appealing to all drivers of motor vehicles to drive with consideration for other users of the highway, and is urging members of the automobile club—which is a society of encouragement of the motor movement—is not an example by so driving their automobiles as to inconvenience as little as possible the public generally.

The committee of the club feels sure that the members of the club generally do not desire that high speeds to the danger of the public but also to the annoyance of other users of the highways of the United Kingdom, and deprecates the use thereof of cars intended to be driven at excessive speeds. The committee also realizes that motor vehicles of low power are at times driven very improperly.

It therefore wishes it to be understood that the committee of the club is resolutely setting its face against motor cars being driven, not only at high speeds to the danger of the public but also to the annoyance of other users of the highways of the United Kingdom, and deprecates the use thereof of cars intended to be driven at excessive speeds. The committee also realizes that motor vehicles of low power are at times driven very improperly.

The public is provided by the legislature with effective measures for bringing to justice drivers of motor vehicles which are driven at excessive speeds, or to the danger of the public, and it is therefore not necessary for the club to invite the consideration of the public in connection with these punishable offenses.

The committee, however, invites the public to draw attention to flagrant offenses by motor drivers against the laws of etiquette and good feeling which are well understood and generally observed by all classes of road users, and to such conduct as may, by causing unnecessary vexation and inconvenience to the public, prejudice the best interests of automobilism in this kingdom. Among the offenses which may be included under the heading of inconsiderate driving, the following instances may be given:

1.—The driving of a motor vehicle in overtaking or passing other vehicles, cyclists, or pedestrians at such an immediate speed as to cause unnecessary inconvenience or vexation by dust or mud.

2.—The overtaking and passing of another motor vehicle when the latter is proceeding cautiously down hill, or is approaching a corner, traffic, etc.

3.—The passing of another vehicle so as to drive it off the road, or cause them unnecessary inconveniences.

If the offender be a member of the automobile club he will be dealt with under the following rule:

"In the event of a grave breach, by a member, of the rules and regulations of the club, or of conduct on the part of a member rendering it desirable that he should cease to be a member, a meeting of the club committee shall be convened, at which such member shall be invited to attend, to enquire whether a cause of expulsion has arisen or not. In the event of any member being in the opinion of the committee, guilty of reckless driving under circumstances involving conduct which the committee may consider unpardonable, or ungentlemanly, or prejudicial to the interests of automobilism, he shall be called before the committee, and, failing a satisfactory explanation, he may be cautioned, or suspended, or required to resign his membership, etc."

If the offender be not a member of the Automobile Club of Great Britain and Ireland, but be a member of an affiliated club, the complaint will be passed on to the committee of that club.

If the offender be not a member of an automobile club, the complainant will be so informed, in order that he may take such action as he may consider to be advisable.

It is hoped that no complaint will be made unless the offense is clear, as in the event of the offense being denied it will be necessary to ask the complainant to substantiate his complaint before the case can be dealt with.

The committee has appointed special committees to study the following important questions:

1.—The points in the design of motor cars which tend towards the raising of dust, and features of construction which tend to lessen this inconvenience.

2.—To watch experiments which are being made under the auspices of public bodies and the press with preparations which it is claimed when applied to a road surface secure dustlessness, in order that full information as to the cost and effectiveness of the systems may be at the disposal of road authorities.

3.—The proposed inauguration by the club of a new form of competition which may turn the attention of constructors towards increased efficiency in the ordinary touring and commercial motor cars, rather than to the erection of special machines in which everything is sacrificed to speed.

#### SUMMER HOME OPEN

Detroit, Mich., June 6—Before this number of *MOTOR AGE* reaches its readers the pretty new country club house of the Detroit Automobile Club will have been formally opened. Wednesday, June 8, was the date set for the dedication. It is expected that local automobilism will receive a big boom in consequence of the new club house. The new home is located 14 miles out on the Birmingham road, one of the most charming runs to be found in America. The dedication has been done under the personal direction of Miss Catherine Shearer, one of the members of the organization, and the other members of the club are very enthusiastic over the beauty of her work. Everything is in appropriate club style, the woodwork being all Flemish oak and the upholstery of the furniture mostly in leather. The walls are all hand painted by Miss Shearer, pretty little automobile scenes making it a scheme of decoration at once artistic and in keeping with the character of the organization. One of the prettiest rooms in the house is the ladies' room on the second floor. Here the decorations are all in white and in hand work. In the rear of this room are the apartments of the steward and his wife. The grounds are very prettily laid out, not the least pleasing feature being a number of tents disposed at various points for the use of dinner parties on warm summer evenings when the interior of the house would be warm and close. One of these tents was donated by the Ford Motor Co. and another was the gift of the Peerless company. A third tent is to be erected down in the little grove in the rear of the club house. The Detroit club is not interested in promoting races, contrary to reports. The organization is, however, working hard for good roads. The chairman of the good roads committee Edwin S. George is scrapping with the street railroad company, the municipality, and everyone who has anything to do with the condition of local roads.

#### GOOD ROADS ENVOY

Frank Z. Wilcox, of Syracuse, N. Y., was appointed a special commissioner to carry a message of greeting to the Good Roads Improvement Association of Great Britain, which meets at London next month, by the National Good Roads Association, of which Mr. Wilcox is a vice-president.

## NEW LAW NOW IN FORCE

### Motorists Securing Licenses Under New Act—Hoodlums Arrested for Throwing Stones

New York, June 5—The new state automobile law has gone into effect and owners and drivers will now be held responsible for all violations of its provisions. It calls for a speed of 10 miles an hour in the heart of cities, 15 miles an hour in sparsely-built sections, and 20 miles an hour in the open country. Cars must carry seals bearing their registry numbers in addition to the present tags. These numbers must also be painted on the front lamps. The registry tags of other states will be recognized. The speed limit for Central park remains at 7 miles, though an effort is being made to have the park commissioners raise it to 10 miles to conform to the law for streets.

That the stories the automobilists have been telling of the constant attacks made upon them by east side hoodlums are not exaggerations Police Commissioner McAdoo proved yesterday in the manner he promised he would. He sent out four inspectors in cars filled with detectives in plain clothes on tours of the east side streets. Inspector Schmittlerger, who had his wife with him, found what he was looking for with a vengeance. He was attacked in three sections of the city by hoodlums throwing stones, vegetables and other missiles. In one place up in Harlem his capture of two Italian boys resulted in a riot through their fellow countrymen trying to rescue them. Five prisoners were the "bag" for the day. These exciting trips and the publicity attending them will probably soon abate the nuisance. Mr. McAdoo is preparing a list of streets leading to and from the Long Island ferries, which will be guarded by police and detectives. Members of the Automobile Club and drivers generally will be furnished with confidential copies of the list. To publish the streets to be guarded would defeat the detection and punishment of assaulting hoodlums.

A. C. A. members have received from Secretary Rutter a letter of instructions as to the privileges that have been secured for them at the Manhasset Bay Yacht Club house. The American Yacht Club has only extended club privileges on rainy days and not permanently as heretofore erroneously assumed.

Robert Lee Morrill was the only one of the A. C. A. tourists to complete the schedule spring run to Gettysburg and Atlantic City. He drove his Locomobile over the entire course of 600 miles.

#### DETROIT'S AUTOMOBILE SCHOOL

Detroit, Mich., June 6—The local automobile school has been very successful this year, in spite of the fact that it was only running a few weeks, and it is proposed to make that of next year one of the best in the country. The local school has been conducted under the auspices of the Y. M. C. A., and some of the best automobile men in the country delivered lectures. Dr. R. C. Rudy, an enthusiastic automobile man, has been placed in charge of the school, and is already outlining a program. "We are going to have a big school next year; in fact, I think it will be one of the biggest in the country," said Dr. Rudy in discussing the matter with a *MOTOR AGE* man. "The school is going to be run in departments, and there will

be severe examinations. No member of a class will be permitted to take up another department until he has successfully passed the examination in the first one. First, there will be a beginner's class. This will include all those who have little or no knowledge of the automobile. They will be given general knowledge of construction and operation. Next there will be a mechanical class, for all men of mechanical bent. Such men as have some knowledge of the automobile are eligible to this class. Here they will take up the various parts of the automobile, assembling and similar features. After that will come the drivers' class. Here men will be taught to be expert operators. The last class will be what I might call an expert class. This will be devoted to those men who wish to study thermo-dynamics. When a man has completed this class he ought to know about all there is to know about the automobile."

#### YORK STATE ROAD IMPROVEMENT

That some improvements have been made in the New York state roads is evident from the \$393,492 appropriation by the state under the Fuller law, which has been allotted as follows to fifty-one counties: Albany, \$7,108; Allegany, \$2,346; Broome, \$10,231; Cattaraugus, \$1,645; Cayuga, \$5,165; Chautauque, \$13,329; Chemung, \$1,167; Chenango, \$4,757; Clinton, \$797; Columbia, \$8,895; Corland, \$3,796; Dutchess, \$18,005; Erie, \$6,895; Essex, \$4,859; Franklin, \$1,638; Fulton, \$499; Genesee, \$1,000; Greene, \$7,005; Hamilton, \$2,533; Herkimer, \$6,690; Jefferson, \$6,968; Lewis, \$544; Livingston, \$6,357; Madison, \$10,291; Monroe, \$10,370; Montgomery, \$2,625; Nassau, \$10,750; Oneida, \$10,288; Otsego, \$24,117; Ontario, \$6,013; Orange, \$16,300; Orleans, \$4,690; Oswego, \$7,751; Otsego, \$8,820; Putnam, \$5,345; Rensselaer, \$10,769; Rockland, \$6,290; Saratoga, \$5,625; Schoharie, \$4,759; Schuyler, \$1,432; St. Lawrence, \$16,215; Suffolk, \$40,952; Sullivan, \$1,582; Tioga, \$8,153; Tompkins, \$8,306; Ulster, \$3,832; Warren, \$769; Washington, \$7,996; Wayne, \$3,893; Westchester, \$33,740; Wyoming, \$500.

#### EXPORTS GROW APACE

The latest returns of the department of commerce and labor at Washington show that the exports of automobiles and parts during April were valued at \$236,758, a substantial increase over the exports for the same month of last year, when the value was \$134,680. During the 10 months ending April, 1904, the total exports were valued at \$1,542,535, as against \$894,521 for the same period of 1903, and \$668,731 for the 10 months of 1902. These figures are of interest as showing the growing importance of our export trade in automobiles, a trade that is growing by leaps and bounds, and which is destined to reach enormous proportions as the merits of American cars become known in foreign countries.

#### AUTOMOBILE A CIVILIZER

A French automobile manufacturer who went to Indo-China about 6 months ago recently sent information to a Paris trade paper stating that he sold a Darracq car to the emperor several months ago and that his majesty became so enthusiastic that he ordered a Gardner Serpollet soon after and now wants a big racer. The manufacturer was made a knight of the Annam Bragan and, being already a knight of the Kim Karu, says he is ~~near~~ from death and also from brigands. Trade is good among the wealthy Chinese, and motor cars are at a premium.

## GOOD RACES IN DENVER

### Crowd of 7,000 Enthusiastic People Turn Out To Witness the Decoration Day Affair

Denver, Colo., June 4.—The Decoration day race meet on the track at Overland park was in every sense a success. There was no Barney Oldfield, no Earl or other Kiser, and not even a Frenchman with a pompous name and a racing car from across the sea; there was, however, an army of from 7,000 to 8,000 Denverites full of enthusiasm.

Several hours before the races were to start the crowd began to arrive, and by the time the first event was called every available place was filled. In front of the grand stand and in the infield there were over 100 automobiles. Gasoline cars predominated, but there were plenty of electric vehicles in charge of the fair sex.

There were eight automobile and motor bicycle races, which made it lonesome for the only bicycle race scheduled. The riders on the forerunners of the motor cars seemed depressed at the lack of enthusiasm, although they rode their best, but it was like the race between a sprinter and a long-distance man at 100 yards when all eyes are on the former.

The event which was to be the principal attraction, the match race between Charles Bliz in a White, and George Hering in a Stanley, ensued disappointment, owing to the non-appearance of the former driver. The Stanley steamer gave a 2-mile exhibition and covered the distance in 2:26 1/2.

The hit of the day was the 5-mile race for touring cars valued at less than \$2,600, and in which there were four competitors. In two of the cars were ladies as passengers, and it was rendered doubly exciting through their screaming and the closeness with which the cars followed each other.

The summary of the meeting is as follows:

Five-mile race for gasoline cars valued at less than \$900.—Won by J. E. Crane, Ford. Time, 10:26 1/2.

Five-mile race for gasoline cars valued at less than \$1,000.—Won by J. E. Crane, Ford. Time, 10:26.

Five-mile race for gasoline cars valued at less than \$1,500.—Won by Dr. S. D. Hopkins, Rambler. Time 10:48.

Five-mile race for gasoline cars valued at less than \$2,600.—Won by S. D. Hopkins, Rambler. Time 10:30.

Two-mile race for electric vehicles.—Won by O. P. Futeble, Baker Imperial. Time, 4:24.

Ten-mile handicap, open to any kind of car.—Won by Dr. S. D. Hopkins, Rambler. Time, 15:08.

Ten-mile open race for any kind of machine.—Won by George Hering, Stanley. Time, 14:07.

Five-mile motor cycle handicap.—Won by D. A. Bonney, 1 minute handicap. Time, 7:17.

#### THOMAS BUYS CONRAD

Huffalo, N. Y., June 6.—At the trustee's sale last week, E. R. Thomas, president of the E. R. Thomas Motor Co., bought the plant of the Conrad Motor Carriage Co., at 1413 Niagara street, the price being \$12,000. At a meeting of creditors for confirmation of the sale, all creditors seemed satisfied with the bid and the sale was confirmed by Reference in Bankruptcy Hotchkiss. There are incumbrances against the

plant amounting to about \$11,300. This will leave the trustee a net of about \$700 to disburse among the creditors.

The plant has a frontage of 90 feet on Niagara street and the building was erected at a cost of \$8,000. It contains about 40,000 square feet and 40,000 more square feet will soon be added by the Thomas company. It will be known as plant No. 2, and will be used principally for bodies, painting, upholstering, testing and shipping.

This makes four different plants being operated by the Thomas company. The company has also contracted for a large plot of ground in the rear of the present factory, upon which factories will be erected for additional machine shops, aluminum and brass foundries and an assembling room.

#### KICKING STARTS EARLY

Boston, June 4.—The news that the N. A. M. may require the sanctioning of local shows, has caused no end of comment among the local dealers who have an association that has for 2 years held shows. The local dealers feel that since they have built up the show business on their own account, and without any expense, of importance, to the companies they represent or to the national association, they should not at this time be hampered by the N. A. M. They say, further, that when the time comes there is bound to be an interesting condition of affairs in this city, for they have already set the date and secured the hall for the show of a year hence, which is contradictory to the proposed ruling of the N. A. M., which provides that the national association shall select the dates of local shows.

It may be, however, that the dealers are unnecessarily alarmed for it is thought by conservatives that the N. A. M. will deal generously with such able and established show managers as the Boston dealers.

#### DISCUSS GARAGE CHARGES

Providence, R. I., June 4.—The question of charges at garages for repairs and care of automobiles is all the talk in this city at the present time, and during the past week it has been the one question that has been debated thoroughly. What started the controversy was an article in the Providence Journal of May 30, which stated that garage keepers were asking altogether too much for the work they are doing, the article quoting figures from some bills submitted to show that automobiling is very expensive. The article said in rather plain language that some of the charges were all out of reason, and that many motorists would never have purchased machines had they realized for one moment that their bills would foot up to the figures they do at the end of every month. It quoted a recent purchaser of a touring car as saying that he reckoned that it would cost him \$1,500 this year for his little fly at the game.

Naturally the garage keepers are up in arms and say there is not a bit of truth in any of the figures quoted. They say that a touring car costs about 1 cent a mile to run. They say they are not coming out with a balance on the right side of the ledger at the end of the year, rent, supplies, insurance, labor and other expenses cutting down all of the profits that might come to them. They say, moreover, that the men who have had big bills must have run into trees or tried other gymnastic feats and declare with great emphasis that such bills as were mentioned were absolutely impossible.

## SANCTION LOCAL SHOWS

### N. A. M. Will Probably Regulate Minor Exhibitions—No Change in New York Show Date

At the meeting of the executive committee of the National Association of Automobile Manufacturers in St. Louis, Wednesday of last week, one of the most noteworthy features of the business transacted was action taken relative to the holding of local shows. Briefly it was decided that local shows must be sanctioned by the association to be eligible to exhibitors from the ranks of the N. A. M., the latter being bound not to exhibit at unsanctioned shows under penalty of suspension for 15 months from the privilege of exhibiting at sanctioned shows, including the two national shows.

The action is said to further provide that sanctions will be granted only to local trade associations and clubs and that the setting of the dates will be up to the N. A. M. Each sanctioned local show must be purely an automobile show. Show managers must have the price of exhibition space "O. K.'d" by the association and must give N. A. M. members the preference in allotting space.

The recommendations of the show committee will probably be discussed at a conference of an N. A. M. committee with the clubs and associations that have conducted local shows and who will be likely to again conduct exhibitions of similar sort.

The show committee in that part of its report dealing with the New York show advised the holding of that show at the originally selected time, January 16 to 23, 1905. Subject to the approval of the Madison Square garden management, which has already been obtained unofficially, and of the Automobile Club of America, the concert hall, which at the last two shows has contained the restaurant, will be added to the exhibition space. Also the aisle around the building next to the boxes will be reduced from 10 to 8 feet in width and an extension of the first balcony will be built over the aisle referred to, so that the first balcony will contain a double row of spaces, with an aisle between them, instead of a single row as heretofore. These changes will add approximately 7,200 square feet of additional exhibition space. The numbering of spaces on the official diagram will be abandoned, and application will be made for the number of square feet required, instead of for a space of arbitrary size as heretofore. Exhibitors will be confined to a stated number of square feet per vehicle to be exhibited, no duplication being allowed.

The freight rate committee reported personal interviews with the majority of the members of the official classification committee of the railways, most of whom had expressed the opinion that the present classification is not burdensome and that the present classification of horse-drawn vehicles is too low. Several members had, nevertheless, expressed willingness to make some concession.

#### NEW BATTERY OUT

Providence, R. I., June 6.—The Rhode Island Electromobile Co. has recently patented a battery to be used on automobiles which has shown ability to run about 60 miles on one charge and without injury. Last week two carriages, one a Waverley and the other a Colum-

ban, made the run to Boston equipped with three batteries and made the distance of 47½ miles without difficulty. The Waverley had thirty-two cells and a 2½-horsepower motor, and the Columbia had forty cells and a 3-horsepower motor. The voltmeter indicated a drop of 3 volts during the course of the trip, and as the limit of mileage is not reached until there is a drop of 8 volts, it is evident the machine had considerable mileage in reserve. The cells weigh 29 pounds each, which makes the weight carried by the Waverley 925 pounds, a heavier load than the carriage is designed to carry. This battery moreover has been used for 18 months and durability is one of the chief merits claimed for it based on the construction of the cells. The active or working material is confined to the grid by a separator, which keeps the plates apart, and while retaining the active material in its place in the grid allows perfect circulation of the electrolyte to every part of the plate. The positive plate, which is subjected to the hardest wear and tear, is heavier than the negative plate, and thus the load is equally distributed. On level roads the rate of discharge is 20 amperes; on average hills it runs up to 60 or 65 amperes, and to 100 amperes on heavy grades.

#### ELECT NEW OFFICERS

At the recent election of officers of the Automobile Club of New Haven, Conn., the following were elected: President, W. T. Dill; vice-president, Fred H. Waldron; secretary, F. E. Bowers; treasurer, J. Howard Marlin; board of directors, George A. Maycock, George W. Keeler and Eugene Buckman; trustees, Mark Ryder for 1 year, H. H. Barnes for 2 years, and D. C. L. Lamb for 3 years. About fifty motorists are members of the club.

#### RECENT INCORPORATIONS

Port Jervis Automobile Livery Co., capital \$1,000, dealing in automobiles. Incorporators: P. C. Rutan, F. B. Williams and John A. Rutan.

Upton Motor Co., capital \$200,000. To manufacture and sell motors and engines. Incorporators: Edward Eldred, Frederick C. Mandin, New York city; Kenneth K. McLaren, Jersey City.

#### NAME WANTED

An automobile club was formed at San Diego, Cal., June 1. Sixteen owners of motor cars met for the purpose and Roy Howard was named chairman. A committee consisting of J. W. Sefton, Will Jereslaw and C. W. Buker was appointed and will select a committee on by-laws. At the next meeting of the organization it is expected that a name for the club will be decided upon and officers elected.

#### DISTILLERS ORGANIZE

Last Monday nearly forty motorists met at the second meeting of the Peoria Automobile Club, Peoria, Ill., which was held in the assembly room of the city hall. It was decided that officers would be elected at the next meeting of the club.

#### DAYTONIANS HOLD RUN

About twenty motor cars carrying forty-six persons took part in a club run arranged last week by the Dayton Automobile Club, Dayton, O. Franklin was the objective of the run and it was an enjoyable affair.

## LAW ON RENTING RATES

### San Francisco Supervisors Pass Bill Permitting Only \$2.50, per Hour for Automobiles

San Francisco, Cal., June 3.—An ordinance was introduced this week at a meeting of the board of supervisors, having for its object the regulating of charges for renting out automobiles and for general automobile livery service. The bill provides a charge not exceeding \$2 for hack service for one or two passengers for a distance not exceeding one mile, and for three or four passengers, \$2.50; for each additional mile for each passenger, 25 cents may be charged, provided that no additional charge shall be made for stoppages for periods not to exceed in the aggregate 10 minutes.

For cars for four or less engaged by the hour, \$2.50 for the first hour, and \$2 for each succeeding hour may be charged. No extra charge to any passenger shall be made for the ordinary amount of baggage, in any kind of service.

The merchants and others interested in the matter are in favor of the new ordinance.

Frank J. Symmes, president of the Merchants' Association, said:

"The rates charged for automobiles seem to me to be excessive. Not being an automobilist, I am not competent to state what would be a reasonable rate; and still \$5 an hour appears to be too much. It is generally understood that the cost of running and maintaining an automobile is not more than keeping a team and hackney carriage, and yet there is a great disparity in the fares. For that reason, I believe there should be an ordinance regulating the fares for automobiles. There should be a reduction, and the Merchants' Association will be behind any such movement. Of course the association would first hold an investigation to ascertain what is a reasonable charge, before making any recommendation. At first blush, \$2.50 an hour would seem reasonable enough. There are two sides, however, to the question, and we must hear them before acting. Certainly we cannot be too liberal to our tourist guests. And when we get them in the city, we certainly should not overcharge them for anything, for that would undo all the work, which has cost a great deal of money and the expenditure of tremendous energy by the promotion committee and other organizations to bring people to San Francisco. We are making a bid for the tourists, and we should not drive them away."

#### N. A. R. A. D. HUSTLING

The National Association of Retail Automobile Dealers is busy perfecting its organization and recruiting. An extensive membership is hoped for by the close of this season and the officers are making a strenuous effort to hasten the day when the organization will be strong enough to be of great importance in the industry. Hence membership is now the war cry.

The following committees have been appointed:

Membership—William E. Metzger, Detroit, Mich., chairman; Fred Pate, Kansas City, Mo.; W. J. Riddell, Des Moines, Ia.; Joseph Gunther, Chicago; Colorado Auto Co., Denver, Col.; Cadillac Co., of New York, New York;

A. C. Halsey, St. Louis, Mo.; Samuel Campbell, New Haven, Conn.; George Paddock, Newark, N. J.; White-Blakeslee Auto Co., Birmingham, Ala.

Transportation and Railroad—Sidney B. Bowman, New York, chairman; A. S. Thompson and A. M. Rothchild & Co., Chicago; W. S. Daniels, Grand Rapids, Mich.; Halsey Automobile Co., St. Louis, Mo.; Kentucky Automobile Co., Louisville, Ky.

Rules and Regulations—Fred Patee, Kansas City, Mo., chairman; H. S. Turner, St. Louis, Mo.; Geo. Paddock, Newark, N. J.; Cadillac Co., of New York, New York; Rochester Automobile Co., Rochester, N. Y.

Factory—Jos. J. Mandery, Rochester, N. Y.; C. A. Orey & Co., Chicago; G. E. Blakeslee, Jersey City, N. J.; Frank P. Hilsiey, Chicago; Harry Pence, Minneapolis, Minn.

#### GIVES WARNING

The commissioners of Northampton county, Pa., have given instructions to the county engineer to have poles erected and signs placed on them which will bear information for motorists that the rate of speed on the highways is 10 miles an hour and that violators will be punished with a fine of \$25 for each violation. The order applies to three roads which have recently been improved.

#### MOTOR SPRINKLER

The city of Paris is having experiments made with an automobile street sprinkler and will purchase a large number if the results of the tests are satisfactory. The vehicle weighs 6 tons when empty, is equipped with a 35-horsepower motor, and can be run at from 5 to 8 miles an hour.

#### LINCOLN'S LIMITATIONS

The automobile speed ordinance of Lincoln, Neb., provides that cars must not be driven at a greater speed than 8 miles an hour in the city, and that at corners, crossings and on bridges the cars must slow down to 4 miles an hour. At night time the motor cars must be provided with lamps.

#### TESTING LICENSE LAW

A case is now pending before the assistant city attorney of Grand Rapids, Mich., concerning the automobile license question. A motorist was recently arrested for not having had his car licensed and as he thought the arrest was unlawful he is making a test case out of it.

#### CHEAPER RAILWAY SERVICE

French railway companies have recently decided upon a schedule price for the transportation of automobiles. For a distance of 500 miles by passenger train there will be a charge of \$44 instead of \$80 as heretofore. A round trip will amount to \$66.50 instead of \$160.

#### TAXING CARS

The assessor of Sterling, Ill., has decided that owners of motor cars will have to pay taxes on them. There are about a dozen motorists in the town.

#### NO DUTY IN PERU

Under a recent enactment of Peru, motor cars imported into that country are free from all fiscal duty.



## AFFAIRS OF THE CLUBS



A LOS ANGELES CLUB RUN INTO THE HILLS

**Country Home Popular**—More than one hundred members of the Chicago Automobile Club spent last Sunday at the newly acquired Evanston country clubhouse.

**Canadians Out**—Fifty-four motor cars took part last Saturday in the second club run arranged by the Winnipeg Automobile Club, Winnipeg, Canada, this season.

**Young Mud Larks**—Although poured, and the streets looked like muddy country roads, fifteen enthusiastic motorists took part in the run arranged by the Automobile Club of Bridgeport, Conn., Decoration day.

**Will Not Build**—At a recent meeting of the officers of the New Hampshire Automobile Club it was decided not to build a club house this season. Instead the club has rented the New Boar's Head house, at Hampton Beach for a year.

**Rockford's Run**—The Automobile club of Rockford, Ill., held a run to Elgin, Ill., Decoration day. Only five cars with fifteen passengers started on what the local papers report to have been one of the most enjoyable events of the season.

**Buffalonians to Celebrate**—The new club rooms of the Buffalo Automobile Club, Buffalo, N. Y., will be inaugurated Saturday, and 1,000 invitations have been mailed for the occasion. There will be a banquet, followed by addresses and vaudeville. President William H. Hotchkiss and Senator Hill will speak.

**Run to a Cottage**—The Automobile Club of Kansas City, Kan., will hold a club run to Bedelia July 3. A committee consisting of Roy Sunborn, H. C. Merrill, E. P. Moriarty and President Dobbie was appointed to look after the matter of securing comfortable accommodations. A cottage is favored for this purpose.

**Club to Prosecute Scorchers**—On account of many complaints having been made to the police officers of Racine, Wis., against motorists driving too fast in the streets of the town, the Racine Automobile Club will investigate the charges and help prosecute offenders and even take steps to exclude them from the club if they are members of the organization.

**Heavy Loss**—The recent fire in the garage of the Automobile Club of Nice, France, resulted in the loss of \$20,400 to the club, this amount representing the value of seven cars belonging to some of its members. About \$58,000 is the amount of the loss sustained

by the garage for the building and thirty cars. There was \$2,500 worth of accessories in the store room and about \$2,000 in the safe, all of which was lost.

**Hill Wanted**—There was a meeting at St. Paul, Minn., last week of the St. Paul Motor Cycle Club, and after a lengthy discussion the members were not able to finally decide on what hill to hold the projected hill-climbing contest. As the event is to take place at the state fair, which is in September, it is very likely, however, that before that time a proper course will have been selected.

**Runs to Rochester**—An automobile run is being arranged by the Automobile Club of Buffalo for June 15, the destination being Rochester, N. Y. It is possible that the Buffalo club will ask the Automobile Club of Syracuse to arrange a run on the same day, also to Rochester, which would enable a very notable gathering of New York state motorists in Rochester the day after the cup race.

**Half a Thousand**—The Automobile club of America has issued its 1904 book. The present strength is shown to be 544 members, including 106 associate members. Of the active members all but thirty-five are owners of automobiles, and more than 7,000 are possessors of several machines each. If the attendance encourages it, the club will have weekly Saturday runs to the Manhasset Bay Yacht Club, its suburban headquarters.

**Gathering of the Clans**—The second annual meeting of the Missouri & Kansas Automobile Association will take place August 6 in Leawacorth, Kan. It is expected that from 100 to 200 motorists from the two states will be at the gathering and information was received by the president of the organization that parties are now being arranged in Kansas City, Atchison, St. Joseph, Omaha, Topeka and Lawrence, which will go to Leawacorth in their cars.

**Columbus to Parade**—At a meeting of the Automobile Club of Columbus, O., held last week, it was decided that no race meet and automobile show would be arranged for the week including the Fourth of July, as had been the intention of the officers some time ago. A parade will be held June 18, and efforts are being made to have every owner in town participating. It is expected that more than 300 cars will be in line under favorable weather conditions. Governor Herrick was named an honorary member.

**Big Coast Endurance Run**—The Automobile Club of California is planning, in conjunction with the Automobile Club of Southern California, to hold an endurance run from San Francisco to Los Angeles and back. The local cars will run to Los Angeles, where they will be joined by the southern contestants, who will accompany the 'Frisco motorists home and then journey south again, making the round trip for all cars entering the endurance run. The affair will take place some time during July.

**Ribbons and Buttons**—The Automobile Club of Syracuse, N. Y., has placed an order for suitable ribbons and buttons, with the club colors, blue and red, to be distributed among the members that they may be recognized by the visiting tourists who will go through the city on the St. Louis tour this year, and receive the entertainment of the local motorists. The first club run of the season will be held this week, when a trip to South bay, on Oneida lake, a distance of 12 miles, will be made. Dinner will be served to the members at the lake.

**Going It Alone**—Disappointed in the action of the New York state fair commission in deciding against holding automobile races in connection with the state fair this year, members of the Automobile Club of Syracuse are endeavoring to have a meet independently. President Brown is endeavoring to secure the state fair track for September, and as soon as dates are secured will seek the sanction of Chairman Partridge. Efforts are being made to secure the track for Saturday, September 17. Secretary Elliott will leave during the week on a business trip to Pittsburgh, Philadelphia and New York and while in those cities will look after the interests of the local races.

**President Resigns**—At a meeting of the board of governors of the Automobile Club of California Frederick A. Hyde resigned as president and as a member of the board of governors. R. P. Schwerin was elected to fill the presidency and Thomas Magee, Jr., as a member of the governor's board. At the same meeting it was decided to do away with the tours and racing committee and an executive committee was appointed instead. S. G. Buckbee, C. C. Moore and L. P. Love were appointed members, with Mr. Love as chairman. A committee on membership and election composed of Messrs. McNear and Magee was elected, while John D. Spreckles and ex-Governor Budd were appointed a legal and legislative committee.

**Still Considering**—The Rhode Island Automobile Club has elected John H. Dennis as secretary to succeed H. H. Rice, resigned, but at the meeting of the board of governors when this action was taken nothing was done in regard to approving or disapproving the proposed union of the A. A. A. with the A. M. L. There seems to be a disposition on the part of the club to go slowly in this matter, and the decision may not be reached until some time from now. The run to Readville, Mass., Memorial day was disappointing on account of the rain in the afternoon, and also on account of some discourtesy which the club members say they were called upon to endure at the track. No united action in regard to this matter has been taken, but it is an open secret that many were much dissatisfied with their experiences there.

# GOSSIP OF THE GARAGES

**Year's Guarantee**—The Duert-Ward Co., of New York, has announced a year's guarantee on the Royal Tourists.

**Looking Around**—L. H. Kittridge, of the Peerless Motor Car Co., visited the Banker Bros. Co.'s New York garage last week while on an eastern trip.

**Three-Cylinder Relay**—The fine stock of cars in the garage of A. L. Kull & Co., Washington, D. C., agents for the Relay and Ford, was augmented this week by the receipt of a three-cylinder 24-horsepower Relay car. The Relay has proven a winner in the national capital.

**Bought Big Garage**—The deed of transfer to the National Capital Automobile Co. of the big garage of Fourteenth street, Washington, D. C., was recorded last week. The purchase price was \$36,000. Manager Wood hopes to become installed in the new location within the next 10 days. He reports a great demand for the Oldsmobile touring car.

**Big Renting Rates**—J. J. Hickey, of New York, is doing a big exclusive rental business in New York with a Peckard, three Autocars and a trio of Knox touring cars as his outfit. Metropolitan rates are \$5 an hour or \$40 a day, and are easily obtained. As high as \$75 was paid for a car on Brooklyn hand-cap day; \$60 was the average price.

**Henley's "Auto Inn"**—Richmond, Ind., is likely to be made famous among automobilists by the St. Louis tour. It is one of the stopping places on the route from New York and while not so large as London or Paris, it boasts of a couple of hotels which claim precedence over other hostleries for miles around. Also one of its residents who has been appointed a member of the tour committee, M. C. Henley, is proprietor of one of the most modern garages in the west, and this will be headquarters for St. Louis tourists. Aside from securing gasoline and lubricating oil, members of the caravan may secure much

accurate information concerning the bicycle industry, roller skating and allied pastimes, Mr. Henley being well posted on such topics. In fact, the posing of Richmond will be a good chance for old cyclists to stop and shake hands with the men they remember as having built the aristocratic Henley in the days they pedaled their way across the country. Mr. Henley's garage is called the Auto Inn and has just been completed on modern lines and with excellent appointments. It has capacity for at least seventy-five automobiles, and has a complete machine shop furnished with power and machinery and tools for automobile repairs and special work. It is located a short distance from the Westcott hotel, at 1207 East Main street, which is a continuation of the famous national road through the city. This road between Columbus and Indianapolis, Ind., is one of the finest pieces of gravelled and macadamized touring road in the United States. The big tour having been divided, part will go by the northern road from Pittsburg to St. Louis, through Columbus, Richmond and Indianapolis. Automobile matters in and about Richmond have received a great impetus this spring. Henley & Son represent a number of the leading manufacturers, and have sold quite a number of automobiles in the city and in that part of the state, which is known to have ideal roads for automobile touring. In the center of such a touring district Auto Inn should prosper.



THE "AUTO INN" AT RICHMOND, IND.

vides that all cars must be registered and numbered. The figure must be at least 3 inches high,  $\frac{1}{2}$  inch wide, and be made of white metal upon a dark background. Lamps, bells and horns must be provided and violation of the ordinance will be punished with a fine of from \$5 to \$100.

**Going to Show 'Em**—No speed ordinance has yet been passed by the aldermanic body of Elgin, Ill. The trouble is that the city fathers cannot agree upon the limit of speed, some maintaining that 7 miles an hour is sufficient, while others are not contented with 15 miles.

In order to have matters straightened out, members of the Elgin Automobile Club have volunteered their cars in order to demonstrate

**Visiting New York**—Albert Otto, the Paris representative of the Auto Import Co., is visiting the New York headquarters.

**Steamers in New York**—J. D. Durbin has opened a New York agency for the Stanley steam car, with headquarters at 1709 Broadway.

**Handles the Iroquois**—W. C. Spencer, formerly a salesman with the Cadillac and Georges Richard-Brazier concerns, has taken the New York agency for the Iroquois, a four-cylinder 30-horsepower car selling for \$2,000, and opened headquarters at 140 West Thirty-eighth street.

**Run to Philadelphia**—The Brooklyn Automobile Co., of New York, is having the Haynes-Apperson cars, ordered by E. T. Rose, who has opened a Philadelphia agency for them at 3425 North Second street, driven to the Quaker city. The run of 100 miles is made in a little over 5 hours.

**Prize Garage Talk**—F. A. Bennett, formerly agent for the Oldsmobile at Riverside, Cal., has taken the agency for the lines handled by the Pioneer Automobile Co., of San Francisco—Oldsmobile, Stevens-Duryes, Winton and Locomobile—for Alameda and Contra Costa counties. Mr. Bennett will open a store and garage in Oakland within a short time. Before going to California Mr. Bennett had 3 years' experience in the Olds Motor Works in Detroit, Mich. Cuyler Lee has established agents for the Cadillac in all the important towns in California, Oregon and Washington. Business is growing so rapidly that Mr. Lee finds his present quarters inadequate and is having a new and handsome garage built on Golden Gate avenue, near Hyde street, San Francisco. The Pope-Toledo Touring Car Co., of San Francisco, has taken twenty-seven bona fide orders for the four-cylinder car and shipments are being received at the rate of fifteen cars a month. K. A. Keedling will represent the Rambler in San Jose, Cal.

## AUTOMOBILE

**Canadians Object**—The legislature in Quebec, Canada, recently passed a law fixing the speed of automobiles in the entire province of Quebec at 6 miles an hour in towns and villages and 15 miles an hour on country roads. The measure has caused widespread dissatisfaction among motorists, who claim it is impossible to go at a 6-mile gait without injury to the cars. A petition to be signed by every owner of an automobile and the dealers will be made up and transmitted to the prime minister of Canada, asking that the speed limit be raised, and a competent committee appointed to investigate the matter.

**High Numbers**—An automobile ordinance went into effect last Saturday in Fort Worth, Tex., which requires that motorists must have their cars numbered and registered with the city secretary. Cars must be run at a moderate rate of speed. The only complaint concerning the ordinance is the fact that the authorities decided that the numbers must be 6 inches high.

**All Fine Things**—The second reading of an automobile ordinance was given at the council meeting of Columbus, O., last week. It pro-

## LEGISLATION

that when they claim the speed limit should not be less than 15 miles an hour they are not asking too much. President Garrison will take the mayor and Alderman Ackermann on a demonstrating drive next week. Three other councilmen will be the guests of F. B. Wood. The cars will be driven at speeds varying from 7 to 25 miles and brake tests will also be made. Motorists expect to win a great victory in this way.

**Twelve Miles Allowed**—At a recent meeting of the city council of Davenport, Iowa, an ordinance relating to automobiles was read for the first time. It provides that cars must be registered and numbered and that the person whose name is registered will be held responsible for accidents caused by the car whether that person or another operated the machine at the time of the accident. The numbers must be 3 inches high,  $\frac{1}{2}$  of an inch apart. The cars must be lighted at night. A bell, gong, whistle or horn is compulsory and a speed of 12 miles an hour is permitted, excepting at crossings, where the motorists must slow up. Automobilists must observe the general road rules.

## THE READERS' CLEARING HOUSE

### RADIATION SYSTEM

Omaha, Neb.—Editor *MOTOR AGE*—If the front end of a motor bonnet were left open, or merely covered with wire gauze, and the radiator were made in the tubular form and placed along the inner sides of the bonnet and a suction fan placed back of the motor—assuming the latter to be of the upright variety—so that a strong draft of air would be forced straight through the bonnet, would not the cooling effect of the radiator be as great as when the radiator is placed in front, and would not the rush of air through the bonnet and consequently directly past the motor cylinders, aid considerably in cooling the latter? There would, of course, be some natural outlet for the current of air at the back of the bonnet, with a suitable deflector for preventing the air from striking directly against the dash board.

—J. G. B. REDMOND.

The cooling effect would not be quite so great because the air would be heated slightly upon striking the front of the first coil, and would reach the end coil quite warm and the radiation would not be so effective, radiation to the air being dependent upon the difference in temperature of the air and the coil. If a sufficient volume of air is brought into contact with the tubes the system would be satisfactory, however. The effect of having cold air strike the cylinders would increase the radiation efficiency and probably more than counteract the difference of temperature of the air upon the forward and rear ends of the cooling tubes.

### ATTACHING CYLINDER HEAD

Chicago—Editor *MOTOR AGE*—I am preparing to build a light multiple-cylinder, air-cooled motor. The construction contemplates a cylinder of steel tubing with copper radiating ribs. It is not desirable, under the circumstances, to secure the cylinder head in position by the use of bolts. Is it practicable to screw thread both the cylinder and cylinder head, so that they may be thus held together? If this construction is not good practice how can the head be attached without the use of long bolts running from the head to the crank case?—C. B. BROGAN.

Either screw thread the head to the cylinder, using a copper joint between them, or braze a lug on the cylinder at the head, before boring, having four projections to come flush with corresponding lugs on the cylinder head casting. Use a copper gasket between the two and draw down with four bolts.

### MARINE CARBURETERS

Dubuque, Ia.—Editor *MOTOR AGE*—Is the Krebs carburetor used on any of the American made automobiles. Can it be purchased in this country, and if so from whom? What style of carburetor is best suited to use on a marine motor? Does a float feed carburetor operate successfully in connection with a two-cylinder two-cycle motor? Would a four-blade propeller produce less vibration than a three-

blade propeller on a small gasoline launch.—M. W. LEE.

Smith & Mahley, of New York, will be able to supply the Krebs carburetor. Several American manufacturers use carburetors constructed upon the same basic principle. Reference may be made to the advertising columns. Perfect carburation is more easily attained in a marine motor than in any other type, on account of its having practically a constant load under constant conditions. In many cases the ordinary mixing valve is all that is used, and the results obtained are perfect. A single blade propeller would produce vibration. Any other number spaced angularly equidistant should not produce different degrees of vibration.

### CAUSE OF OVER HEATING

Philadelphia, Pa.—Editor *MOTOR AGE*—I recently had an extra and adjustable air inlet put on the inlet pipe of my 18-horsepower four cylinder car, a good way from the inlet valves, so that it would not affect the mixture. The car before adding this was going well, but I considered was using too much gasoline. Now the extraordinary thing is that if this air inlet is at all opened the engine heats immediately. Why is this?—D. R. PRICE.

It would appear that the air inlet has never been sufficient to provide enough air to obtain the best mixture of petrol vapor and air for consumption in the engine. Since adding the extra air inlet the volume of mixture drawn into the cylinder has been increased, and at the same time the explosive or expansive properties of the mixture have also been increased. The result of this is that a higher compression is attained, and a higher pressure of ignition, both of which would tend to overheat. Previous to adding the extra air inlet the cylinder volume would be small, the compression not so high as at present, and the expansive force of the gas less, while the products of combustion would cause a malodorous exhaust and a high consumption of gasoline.

### FLY WHEEL WEIGHT

New York—Editor *MOTOR AGE*—How is the weight of a fly wheel for a multiple-cylinder motor determined? In other words, supposing that the weight of the fly wheel for a single-cylinder motor were to be determined by some particular formula, how would this calculation be affected by multiplying the number of cylinders, say by four? It seems to me that the fly wheel of a four-cylinder motor could be lighter than that of a single-cylinder motor of the same bore and stroke and running at the same speed, yet I notice that this does not follow out in practice.—H. W. ROGGS.

Theoretically the fly wheel weight for a multiple-cylinder motor is inversely proportional to the number of cylinders. This condition is not fulfilled in practice, because the energy stored in the fly wheel is useful where increased power is necessary for an instant, such as starting on the high gear or a hard pull out of a rut. Suppose a certain single-cylinder motor is equipped with a fly wheel

having a rim weight of 120 pounds, the assumption is that a four-cylinder motor similar in construction would have a rim weight of 30 pounds. In practice this wheel would not store up sufficient energy to assist the motor under excessive temporary loads. Generally a two-cylinder motor will have a rim weight equal to three-fourths that of a single-cylinder motor, and a four-cylinder motor a rim weight of five-eighths that of a single-cylinder motor of the same design.

### GOVERNOR ARRANGEMENT

Chicago—Editor *MOTOR AGE*—I have a car with 6-horsepower de Dion engine and French carburetor, and should like to fit a governing device to it. The only government it has at present is by the exhaust valve regulator, operated by the clutch pedal, but this, of course, is out of action with the car standing, the gear lever in neutral, and the engine running free. Which would you recommend, a governor of the centrifugal type, arranged to operate a butterfly valve in the inlet pipe, thus varying the quantity, but not the strength of the mixture; an auxiliary air valve fitted to the inlet pipe, which opens and admits pure air when the engine races, thus weakening the mixture without decreasing the volume of the cylinder charge.

Compression would, with the first arrangement, be variable, and with the second device invariable. I should be glad of your advice on this matter.—A. C. ARMSTRONG.

The first device or that regulating the volume of the mixture would be preferable.

### SPARKING COMMUTATOR

Minneapolis, Minn.—Editor *MOTOR AGE*—The wire ignition on my car seems to spark very much where it makes contact by the pressure of the roller on the internal brass segment. These brass segments have worn very much, but only where the roller leaves or breaks contact. Is it possible for the excessive sparking to cause this wear? Both plates are worn the same, though the roller runs in oil. I have been told to wire a two-way switch with common ground wire. Will not this cause the accumulators to equalize or average?—W. C. PILLIANG.

The brass segment may be made of very soft metal, hence the wear would be considerable. There is always a spark created when the contact is broken, this being variable in amount according to the make of coil. The brass segment could be replaced by a hardened steel one of the same shape, which would considerably reduce the wear of the surface, and would not just as well. The common ground wire will not cause the accumulators to equalize, as the positive terminals are not both connected at the same time, but only the one on which the switch is moved over to.

### SELECTION OF LEATHER

Grand Rapids, Mich.—Editor *MOTOR AGE*—What is the best kind of leather to use for upholstery the seats of an automobile that is to be used in all kinds of weather?—G. B. M.

The leather manufacturers are all making as especially finished leather that is giving satisfaction where exposed to weather variations. There is a leather substitute called "Pantacite" that has served well on yacht and launch upholstery, that should serve the purpose. Several automobile manufacturers who are using leather substitutes, claim longer life for them than for the high grade leathers. These imitations cannot be detected from leather and are entirely fire and waterproof.

# AUTOMOBILE DEVELOPMENT

## BATTERY CONNECTIONS

W. H. Briggs, 424 Bedford avenue, Brooklyn, N. Y., is introducing a battery connection which is unique in that the copper terminals which are attached to the ends of the insulated wire are provided with small holes in the side of the tubular shank that is pressed down upon the wire. Through this hole a drop of solder is run, so that the mechanical fastening of the clasp is greatly strengthened. The wires are furnished in any length from 4 inches upward.

Herz & Co., 55 Grand street, New York, have supplemented their line of ignition specialties with a battery connection, the copper terminals of which are spoon-shaped to insure a good contact with the battery screw. The terminals are connected by a flexible, rubber-coated copper cable of twenty twisted strands. To obviate loosening of the wire ends in the terminals a bridge fastening is used instead of the ordinary single wrapped terminal shank.

## T-STEEL MOTOR CAR FRAME

The general practice in frame building at present is to construct it of angle or channel shapes, or of pressed steel of channel form. W. F. Richards, M. E., of Buffalo, N. Y., has designed and is preparing to introduce a frame made of T section steel. By using steel shape of T section, it is claimed that a light, strong frame can be made and that the inner leg of the T, located at the center of the vertical web, is adapted for a rigid corner connection as well to take lateral or transverse strains.

The spring arms at the front and rear of the frame for the springs can be made continuous by the extension of the side T's, or the frame can be made rectangular and forged arms be used, if preferred. In either method the corners have the same vertical stiffness. The corner connections, or knees, can be made of light malleable iron castings, or of pressed steel. The knees being riveted at right angles, all of the rivets are not in shearing strain at the same time, a portion being in shear and the balance in tension.

By using T shapes, the body has a solid base, avoiding the necessity of heavy sills, and the body, by resting on the center web of the

T's, rests in a pocket, with the top member of the T's enclosing the body. This practically makes the body and frame one, and few retaining bolts are required, sufficient only to prevent the lifting of the body by the reaction of the springs.

The front portion of the frame can be made narrower for more steering clearance, and the bending of the side pieces for this purpose is said to be simple and inexpensive. The T form is, also, well adapted for secure attachments of cross ties for motor and gear cases. A typical design of such a frame is shown in the accompanying illustration.

## PUNCTURE CURE

The New York Anti-Puncture Tire Co., 132 West Forty-ninth street, New York, has recently placed on the market a composition which is intended to render tires puncture proof, or more correctly, self-healing, and which, it is claimed, has not been found lacking in excellence in over 500 sets of tires which have been treated. The composition is nearly the same as is used in the manufacture of pneumatic tires. Where it differs is in the application and final curing of the tire with steam heat, which the company omits, thus leaving the anti-puncture compound in a soft, spongy, and elastic condition after it has been injected into the tire through the valve. The composition is reduced to liquid form at a temperature of 212 degrees Fahrenheit, and is then injected into the tire, which is revolved until it forms in effect an inner tube of soft rubber. It thus becomes a healer of wounds by filling the punctures made in the tire.

## NEW CATALOGUES

Wheel Wisdom is a little booklet concerning I. & B. steel wheels. It tells how they are made, why they are good and how they are most conveniently repaired, and is issued by the Parish & Bingham Co., of Cleveland, O.

In a typically European cover which depicts an automobile chasing ducks down a country road, the Fiat Italian car is comprehensively described by its importers, Hollander & Tange-nian, of New York.

The Tygard stationary piston engine, which was recently described in MOTOR AGE, is made

the subject of a descriptive catalogue issued by the Tygard Engine, Plainfield, N. J.

Solar Lamps Show the Way, being the title of the new Solar lamp catalogue, the cover design consistently depicts a Solar lamp shedding its acetylene rays over a small army of automobilists rushing downward over the cover to the Badger Brass Mfg. Co., of Kenosha, Wis. The booklet illustrates about a score and a half of different patterns of Solar lamps.

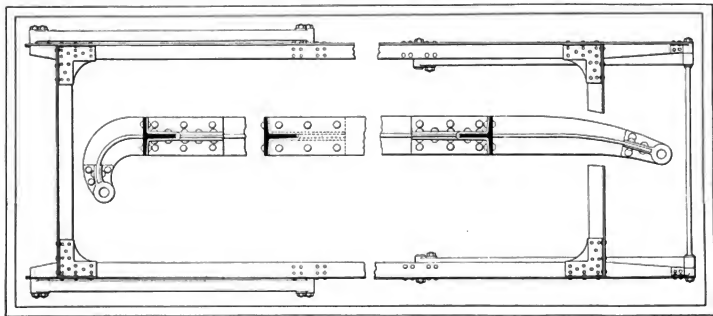
If Peerless cars are correspondingly as excellent as the new Peerless catalogue, issued by the Peerless Motor Car Co., of Cleveland, O.—get a Peerless. It is full of Peerless girls and cars for them to ride in. It is, typographically, in decorative and mechanical illustration, in printing and in general arrangement, so very good that the man who engineered it and the printer who printed it deserve a bouquet of real flowers.

## ENGINE CASTINGS

The Hoffer Brass Foundry Co., of Buffalo, N. Y., which has made a specialty of phosphor bronze, bearing bronze and brass castings for automobiles, has spent considerable time in experimenting in the casting of aluminum motor crank cases and now feels confident that the process resulting from these experiments ensures high-grade work. Two, three and four-cylinder work is especially solicited, on the strength of preparations made for handling it. The growth of the business has necessitated enlargement of the foundry and consequently the company has taken a building adjoining the original plant, and has thus doubled the capacity. Prompt execution of special orders is said to be a feature of the business.

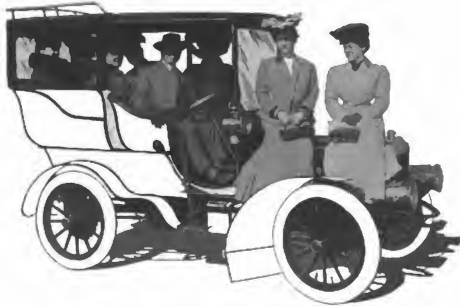
## MAKING MANY MUD GUARDS

It is the business of the American Vencer Co., of New Orange, N. J., to make laminated wood automobile bodies and mud guards and in the latter direction the company is particularly busy just now. The factory is said to have a capacity of 150 sets a day and so the company is prepared to take care immediately of orders for from 100 to 500 sets. Big contracts are not the only orders received, however, for a specialty is made of furnishing guards for different makes of cars in small lots to agents who wish them for replacing broken guards.



THE T SECTION STEEL FRAME PROPOSED BY W. F. RICHARDS

## FROM THE FOUR WINDS



C. A. COEY &amp; CO., CHICAGO AGENTS FOR THE THOMAS

**Races at Spokane**—Automobile races are being planned in Spokane, Wash., to be held during the latter part of fall.

**Street Inspection Car**—The street department of Springfield, Mass., has purchased an automobile which will be used for inspection purposes by the superintendent.

**Four Motor Cyclists**—Thirteen of the seventeen motorists in Norwich, Conn., have gasoline vehicles. There are no electric cars in town and only four motor bicycles.

**Shelby Office Moved**—The Chicago office of the Shelby Steel Tube Co. was recently transferred to room 800 and 801 in the Rookery building, LaSalle and Adams streets.

**Want Speedway**—Automobile owners of Omaha, Neb., have begun a movement petitioning the city council to allow an exclusive automobile speedway to be made on Second avenue.

**Michigan Motorists Increasing**—A newspaper of Coldwater, Mich., reports that there are twenty-eight cars in that Michigan town, while there are about eighteen in Adrian, not far away.

**Test Case?**—A country automobile agent has brought suit against an automobile factory for \$740 commission for having been the means of selling one of the touring cars made by the factory. The car was sold for \$3,700.

**Racing in Mexico**—Members of the committee having charge of the Fourth of July festivities in the City of Mexico contemplate giving an automobile race meeting. The local dealers have promised to take part in the events.

**Three-Cylinder Tour**—C. H. Henshaw, of Boston, the New England representative of the E. R. Thomas Motor Co., is touring through the Berkshire in one of the three-cylinder Thomas Flyers, calling on agents. This week he covers Worcester, Springfield and Pittsfield, Mass.

**Electricity for Mail Service**—After experiments which lasted over 2 years the Paris postal authorities have decided to purchase fifteen additional electric cars to be used in collecting mails and sending the mail matter from one station to another. They will be able to run at an average of 12 miles an hour.

**Rubbered**—Four racing cars valued at about \$55,000 passed through Trenton, Mass., on their way to Philadelphia last week. It is claimed that several thousand townspeople turned out to see the monsters and that a riot was avoided with difficulty owing to the fact that the people scrambled so strongly in order to get nearer and see.

**Ride for Femininity**—In connection with the convention of druggists and pharmacists which is to be held in Rockford, Ill., shortly, the secretary of the Druggists' and Pharmacists' Association of Rockford is trying to make an arrangement with the Automobile Club of Rockford for a special "ride" for the wives, sweethearts, mothers, girl children and mothers-in-law of the conventionists.

**Mountain Stage Route**—As a result of an inspection of the roads between Durango, Col., and Farmington, N. M., by ex-Mayor McConnell of the former town and John A. Carlson of Denver, it is likely that an automobile passenger and merchandise service will be established between the two localities. The trip was made by the two motorists in 14 hours, 15 minutes, but it can be effected in 12 hours easily. The distance of 115 miles.

**In a White, of Course**—Winsor T. White, president of the N. A. A. M. and vice-president of the White Sewing Machine Co., accompanied by Mrs. White and Mr. and Mrs. Charles Hotchkiss, of Cleveland, O., sailed for Europe last week, where they will attend the Gordon Bennett race and then make an extensive automobile trip through different continental countries. The party will return in time to take part in the St. Louis automobile run.

**Century Sale June 15**—Harold Stone, trustee in bankruptcy of the Century Motor Vehicle Co., of Syracuse, N. Y., announces that at 10 o'clock, June 15, he will sell at public auction the company's factory at 517 and 519 East Water street. The terms will be 10 per cent down and the balance upon confirmation of the sale and delivering of the deed. Immediately following the sale there will be a meeting of the creditors at the office of the referee in bankruptcy for the purpose of confirming the sale.

**Meet on the Beach**—A motor cycle race meeting was held on the beach at Portmarnock, Ireland. The distance for the race was 1 mile, with a standing start, and some of the machines covered it at an average speed of nearly 36 miles an hour. All the competing machines were fitted with full touring equipment and the one driven by C. B. Franklin, which weighed 137 pounds, made the best time, 1:42 for the mile, standing start.

**Changed Name**—Amended articles of incorporation of the Seeing Washington & Mount Vernon Auto Co. have been filed with the recorder of deeds of the District of Columbia, the name being changed to All-Around Washington Auto Co. The new concern is capitalized at \$30,000 and is authorized under its charter to operate automobiles for sight-seeing purposes in and about Washington and the surrounding country. Its term of existence is perpetual. The directors for the first year are F. C. Berens, S. B. Emmert and Emilie Nussbaum.

**Crystal Palace Loses Show**—At a recent meeting of the Society of Motor Manufacturers and Traders of Great Britain, it was decided that the society's annual automobile show, which heretofore was held in Crystal Palace, would be held in the Olympia next February. This change will give exhibitors 44,700 square feet more space than at Crystal Palace, which contains about 130,000 square feet all told, while the Olympia has 174,700 square feet available. There is an annex which has about 20,000 feet square and on which it is intended to hold a motor boat show.

**Syracuse Will Parade**—The feature of the tenth annual convention of the Tri-County Firemen's Association at Little Falls, N. Y., July 2 and 4 will be the automobile parade and for the next month the popular salute between people of the Mohawk valley and central New York will be "Meet me at the Falls." The automobile parade will be held July 4 at 4 o'clock. Dr. Percy L. Haight, who will be grand marshal of the parade, says it will rival the automobile division of the Saratoga floral fete in point of grandeur. Over 200 machines have been entered between Amsterdam on the east and Rome on the west, with Mr. Stevens, of Rome, in his \$18,000 Mercedes racing car at the head of the procession.

**Now for Another Ride**—Two young men about 22 years old stole an automobile in Detroit, Mich., last week at 9 o'clock in the evening. The car had been standing only a few minutes in front of the home of the owner. When he came out and noticed the disappearance of his automobile he thought at first some friend had played him a joke and for an hour waited patiently. Then he began to suspect, reported the case to the nearest police station, and a search was begun at once for the missing automobile. After 2 days of hard work the machine was located on Groove Island, 17 miles south of Detroit, and one of the two robbers was caught, and held to the Criminal court in \$3,000 bail, while the other managed to escape. At the time the car was recovered it was in a deep mud hole and the gears for the high speed were all stripped, while there was evidence that the machine had had very hard usage. The robber said that it was much more the desire for a long ride which prompted them to steal the car than the desire to sell it.

# MOTOR AGE

VOL. V NO. 24

CHICAGO, JUNE 17, 1904

\$2.00 Per Year

## CUP GOES TO FRANCE

Thery has won the James Gordon Bennett international cup race for France on the 80-horsepower Georges Richard-Brazier with which he cleaned up the French eliminating race last month over a field of twenty-nine starters. The Frenchman worked to the head of the line early in the race and thereafter was never headed, driving consistently a few minutes per round faster than Jenatz, Mercedes, Germany's favorite. The Austrian, English, Belgian, Italian and Swiss teams all fared badly in the race, which was mainly among Thery, Jenatz and de Caters.

Berlin, Germany, June 17.—The contest for the James Gordon Bennett cup, the international blue ribbon of automobile racing, commenced punctually at 7 this morning, Jenatz leading off in a Mercedes car, the other cars following at intervals of 7 minutes. The weather was perfect. The kaiser and kaiserin arrived at 6:20. Crowds are pouring in on special trains from all directions. Baron de Caters stopped almost immediately after starting on account of a defect in his gear. He lost 9 minutes and started again. S. F. Edge went off at a terrific pace. Each start was announced with bugle. Jenatz, going at full speed, saluted the kaiser. The net times of the first round were: Jenatz, 85 minutes 56 seconds; Edge, 91 minutes 35 seconds; Jarrott, 95 minutes 18 seconds. Girling made the last start. So far as could be seen he was traveling very fast. Jenatz started for the second round at 9:32. He was loudly cheered. His time on completing the second round was 2 hours 55 minutes 29 seconds. They made the first round in 85 minutes. Opel retired from the race at Usingen, as his motor was defective. Another report is that Jenatz made the first round in 87 minutes. In this case Thery is 2 minutes ahead of him. A news agency dispatch gives Jenatz the first round in 86 minutes 56 seconds; Edge, 91 minutes 44 seconds; Thery, 87 minutes 27 seconds; Lancia, 114 minutes 53 seconds; Werner, 118 minutes 41 seconds; Girling, 92 minutes 55 seconds; de Caters, 103 minutes 15 seconds. The report also states that, owing to mistake on the part of the timekeeper, Thery started 30 seconds too soon. He is thus 31 seconds behind Jenatz.

### Thery on Georges Richard-Brazier Wins the International Cup Race

The morning dawned beautifully, with promise of splendid weather for the race. The spectators began to assemble at 6 o'clock. The duke of Ratibor, honorary president of the German Automobile Club, received their majesties and escorted them to the imperial stand. The whole town is living on the doorstep and in the windows. All day yesterday the sidewalks were blocked with spectators, quivering with tense interest as complete as the roadway is blocked by automobiles of every size, shape and color. All competing machines were weighed amid a dense throng. Some little diversity was imparted to the scene by a small fire that started under S. F. Edge's Napier machine just before it was pushed on the scales. More serious is the report that an accident, which disabled the car of Dufaax' Swiss racer, was due to malovelence. As he was passing the kurhaus on the way to the weighing place, the steering pin of his right front wheel suddenly snapped. It did not look like a break.

Hautvast developed a defect after passing Idstein on the first round. During the second circuit Edge met with some trouble and stopped and restarted. Thery, who was leading at the end of the first circuit by 2 minutes, completed the second circuit in 2 hours 53 minutes. The average times of each team for the first circuit were: England, 2 hours 29 minutes; Germany, 2 hours 39½ minutes; France, 2 hours 28 minutes; Italy, 2 hours 47 minutes; Austria, 2 hours 57 minutes;

A Viennese baron, named Leitgeb, who was here as a spectator, died this morning as a result of an accident to his car yesterday. The baroness, who was acting as chauffeur, was seriously injured.

Edge made the second round in 4 hours 7 minutes 54 seconds. The remaining times in the first round are as follows: Salleron, 1 hour 36 minutes 53 seconds; Braun, 1 hour 36 minutes 53 seconds; Cagno, 1 hour 54 minutes 57 seconds; Hautvast, 2 hours 54 minutes 32 seconds; Storero, 1 hour 42 minutes 24 seconds; Augiers, 2 hours 26 minutes 7 seconds; Warden, 2 hours 7 minutes 14 sec-

onds; Rongier, 2 hours 6 minutes 24 seconds; de Cawher, 1 hour 46 minutes 47 seconds.

On the completion of the third round Thery was leading. His time was 4 hours 23 minutes 40 seconds. Jenatz's time was 4 hours 33 minutes 15 seconds. Barring accidents one of these two were at this point bound to win.

The total times of the second round are as follows: Jenatz, 2 hours 55 minutes 29 seconds; Thery, 2 hours 24 minutes; Lancia, 3 hours 3 minutes 7 seconds; Braun, 3 hours 38 minutes 4 seconds; Werner, 3 hours 51 minutes 29 seconds; Edge 4 hours 7 minutes 54 seconds; de Caters, 3 hours 32 minutes 52 seconds; Cagno, 3 hours 38 minutes 2 seconds; Salleron, 3 hours 40 minutes; Jarrott, 3 hours 32 minutes 51 seconds; Storero, 3 hours 26 minutes 44 seconds; de Cawher, 3 hours 31 minutes 11 seconds; Hautvast, 4 hours 45 minutes 11 seconds. The German Automobile Club's figures of the gross times of the third round are: Thery, 7 hours 12 minutes; Jenatz, 7 hours 21 minutes; de Caters, 7 hours 52 minutes; Edge, 8 hours 33 minutes.

Lancia came into collision with Augiers on the fourth round and the latter was injured.

It is reported that Warden and Cagno have broken down. Hautvast is moving very slowly in the fourth round.

Jenatz in the last round narrowly escaped collision with a train at a level crossing.

The Saalsburg committee denies that any collision has taken place. The times given previously are the gross and include the times in the controls. The following are the net times for the second round: Jenatz, 1 hour 27 minutes; Thery, 1 hour 28 minutes; Storero, 1 hour 30 minutes; Salleron, 1 hour 40 minutes; Jarrott, 1 hour 56 minutes.

This gives the race to Thery, representing France and driving a Georges Richard-Brazier, with Jenatz, Mercedes, Germany, who won the cup last year, second, 9 minutes back of the leader, on the gross time for the 341-mile course. Baron de Caters, representing Germany on a Mercedes, was third. It is impossible to calculate the exact rate of speed until the official times are announced by the German Automobile Club. Corrected time of Thery is 5 hours 50 minutes 3 seconds, and that of Jenatz 6 hours 1 minute 28 seconds.



# HISTORY OF THE CUP RACE



POSSESSED now of great international interest, the cup race was inaugurated in 1900 by James Gordon Bennett, who gave the famous trophy, through the trusteeship of the Automobile Club of France.

The rules of the race call for a contest

open to teams of three each from recognized national clubs. Under this category the clubs of Great Britain, France, Germany, Switzerland, Austria, Belgium, Italy and America come. A club is permitted one, two or three members on its team. The maker of the fastest time is the winner of the cup for the club he represents, and he must be a member of that club to entitle him to drive a machine. The victorious club has the right to name the course, which must be a suitable one in the judgment of the trustee—the Automobile Club of France—and must not be shorter than 350 kilometers—341.55 miles—nor longer than 650 kilometers—403.65 miles. The race may be run in laps or in day's stages of not less than 94 miles each.

The competing cars are limited in weight from 500 kilograms—881.84 pounds—to 1,000 kilograms—2,204.60 pounds.

There have been four contests for the cup. Two of them were won by the French team, one by the British club, and one by the German club, which as the present holder of the trophy named the course for the present contest.

The 1900 race was run between Paris and Lyons, a distance of 566 kilometers—351 miles. There were three countries represented, as follows: France by Charron, Girardot and de Knyff; Belgium by Jenatton, and America by Winton. The start was made at 3:14 a. m. The racers reached Limours, 18.6 miles, in the following order and time: Girardot, 35 minutes 15 seconds; Charron, 38:00; de Knyff, 39:30; Winton, 45:00; Jenatton, 1:15:00.

After leaving Limours Winton's machine skidded around a corner and dashed into an embankment, partially wrecking it. Still he pushed on and at Chateaudun, 78.8 miles, he went by at 6:28:50, with a bent wheel in front and a rear tire punctured. Charron reached this point at 5:40:55, Girardot at 5:41:44, and Jenatton at 5:51:56, the leader having ridden the distance in 2 hours 26 minutes 55 seconds.

At Les Ormes, 95.6 miles, the order of arrival was: Girardot, 5:49:00; Charron, 5:55:00; de Knyff, 6:41:00; Jenatton, 6:46:00. Winton continued on to Orleans, where he arrived at half past 8 o'clock, and then quit the race.

Girardot reached Orleans in 5 hours 53 minutes; Charron in 6:10; de Knyff in 6:49; and Jenatton in 6:52. Charron's rear axle was bent in crossing a gutter. The fourth speed of de Knyff's car had been broken at Chartres. Jenatton had several punctures.

Just after leaving Orleans, Girardot broke a rear wheel against a curbstone in trying to avoid a frightened horse. He was delayed at

a blacksmith's for repair until 7:55 a. m. Rene de Knyff abandoned the race at Gien at 11:25. Jenatton burst his tire at Chevreuse and retired.

From Gien on it was a runaway for Charron, who had secured a big lead, while Girardot was delayed for repairs to a wheel. Charron ran over a dog at Moulines and over another 7 miles from the finish. His time was 9:09:49 and Girardot's 10:30:28. The winner rode a Panhard. His average speed per hour was 39.00 miles. Charron had won the Paris-Bordeaux of the previous year and the Paris-Amsterdam in 1897.

The 1901 contest was run in conjunction with the Paris-Bordeaux race. It was a walk-over for the French team composed of Charron, Panhard; Girardot, Panhard, and Levegh, Mors. The latter had ridden unofficially in the race of the previous year and made a good showing as far as Orleans. A German had entered but withdrew, and S. F. Edge, an Englishman, was not permitted to ride because he had replaced a punctured British tire with a French one.

Charron and Levegh collided and left Girardot to finish alone. The winner covered 327½ miles in 8 hours 50 minutes 30 seconds, a rate of 37.02 miles an hour. Girardot finished eighth in the open race of 345 miles, which was won by Fournier in 8:44:14. Fournier covered 330 miles outside of towns in 6:11:44, an average of over 53 miles an hour.

The race of 1902 was run in connection with the Paris-Vienna contest. It was run in two stages, Paris to Belfort, and Bregenz to Innsbruck, a total of 379 miles. A neutralized control of 1 day through Switzerland intervened. French and English teams alone competed. S. F. Edge, C. S. Rolls and Charles Jarrott, driving Napiers, represented England, and de Knyff, Panhard; Fournier, Mors, and Girardot, C. G. V., France.

In the first day's run Rolls ran into a railway gate, and Fournier, while leading, burst a tire near Chamonix. Both were put out of the race. Girardot also broke down and went out the first day.

The second day, which ended the race so far as the cup was concerned, the contest narrowed down to de Knyff and Edge. Twenty-five miles from the finish the Frenchman broke down. Edge finished the 389 miles in 10 hours 42 minutes, having covered the last stage of the journey, 132.5 miles, in 4 hours 35 minutes. It was a rough road to travel, yet the Englishman averaged 36 miles an hour for the whole distance, which was fairly good time considering the difficulties.

The race last year was a Mercedes triumph, the first really notable winning for this famous German machine over the old favorites of France. It also marked the beginning of an era of carefully conducted road races. Coming shortly after the interdicted Paris-Madrid race, when the public authorities of all countries were somewhat at a loss to know what to do relative to automobile road contests, it was held under conditions which did much to demonstrate the ability to render such contests safe if properly managed.

It was an easy victory for the winner, Camille Jenatton, and a shoe-string race with a very frayed rear end. Germany got the cup, but France consistently finished all its cars. America, represented by Alexander Winton, Winton; Percy Owen, Winton, and L. P.

Moores, Peerless, also ran. England finished one car.

The cup having been won the previous year by S. F. Edge on a Napier for the Automobile Club of Great Britain and Ireland, it was up to that club to find a suitable course on British soil. A triangular course was finally found in Ireland and over this four laps were run to make the race.

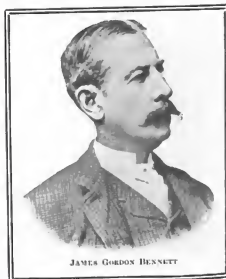
Jenatton, Mercedes, covered the 368-mile circuit in a gross time of 10:15, there being seven neutralized controls. Rene de Knyff, the veteran Panhard driver, was a close second, with Henry Farman, Panhard, and Fernand Gabriel, Mors, the other members of the French team, close behind. S. F. Edge, Napier, was the fifth and only other finisher. J. W. Stocks and Charles Jarrott, both on Napiers, completing the English team, were put out of the race by accidents, Stocks on account of a broken wheel and Jarrott on account of a spill in rounding a sharp turn.

None of the Americans finished the race, their cars not running well, while Baron de Caters and Foxhall Keene, on Mercedes, completing the German team, both retired during the race.

The victory of Jenatton in this race was a popular one, for he had driven a game, intelligent and consistent race, and, furthermore, the car he used was a 60-horsepower machine not intended for the race, the more powerful special cup race cars having been burned in the disastrous fire which a short time before the race completely destroyed the Mercedes factory at Cannstadt, Germany.

## TROUBLES THAT ELIMINATED

The following is a list of accidents which happened to the cars of the French contestants in the recent eliminator race: Baron de Crawley, Hotchkiss, magenta trouble; A. Fournier, Hotchkiss, broken wheel; Amblard, Hotchkiss, broken back axle; Baras, Darracq, rim trouble; Becconais, Darracq, broken starting handle; Wagner, Darracq, leaking tank; Rigolly and Duray, Gobron-Brillie, radiator trouble; Burton, Gobron-Brillie, leak from water jacket into cylinder; Legger, Mors, broken inlet pipe; Leverage, broken clutch spring; Tart, Panhard, overheating of engine; Baron de Caters, de Dietrich, broken starting handle; Jarrott, de Dietrich, broken water tank; Chaniand, Scapollet, broken front axle; Gunders and Henriot, Clement-Bayrol, clutch trouble; Stend, Georges Richard-Herzy, pump trouble; de la Tourette, Turcat-Mery, leaky fuel tank.



JAMES GORDON BENNETT

# THE CONCLUDING PREPARATIONS



THE GRAND STAND AT SAARLOUIS, THE START



THE PRESS AND TELEGRAPH BUREAU AT SAARLOUIS

**H**OMBURG, Germany, June 3.—With the automobile classic, the Gordon Bennett cup race, just 2 weeks away, every preparation for the big event is either completed or so well planned and so far along that the great part may be called finished. So carefully has every detail been considered that there seems now no possibility that the public can suffer harm or even discomfort, and barring breakdowns, collisions, or something of the sort, not a driver of a car should receive a scratch.

The soldiery will be placed on the course at midnight and at 4 o'clock on the morning of June 17 the road will be closed to all save those who are to take part in the race. At 7 o'clock sharp the first car is to be sent away and the others will follow at intervals of 7 minutes, so that it is expected the last will be on its journey before 9:30 o'clock. All traffic on the circuit will be suspended from 4 o'clock in the morning until the race is over. Only the contestants, guards and officials wearing special badges will be permitted on the road.

It was the intention of the committee having charge of the arrangements to close the entire road by erecting a wire fence on each side. This would mean over 175 miles of fencing and the erection of about 60,000 posts. The task was found to be almost impossible and consequently there are only about 22 miles of fencing, mainly at street crossings and in the controls. A change has also been made with regard to the patrolling of the course. Instead of 5,000 to 7,000 soldiers, there will be at the most 2,500 from several garrison towns near by. The local police officials, together with private citizens who have volunteered their services, will constitute the principal force to watch the course.

On both sides of the road, for a distance of about 3 miles, a very high fence has been built, with sharp nails on the top. Admission to this enclosure will cost \$5 but does not give the bearer the privilege of the grand stand at the start. Part of the big forest, which is a few hundred yards from the start, is within this enclosure, and a walk has been especially made to it on each side of the road. Two stands capable of holding several hundred people have been erected in this part of the forest, the first near the Saarlouis restaurant, the other a little further away at the point where the road turns. From this latter point, which is on an elevation, one can see the course for a

distance of eight miles on a nice clear day.

Outside of the enclosed grounds an enterprising undertaker has just put the finishing touches on a grand stand, admission to which will only cost \$1.25. Each of the grand stands at the start will hold from 2,500 to 3,000 people, and as the admission to ordinary seats will cost \$12.50, a nice profit is expected. A tunnel will lead from one stand to the other and a bridge may also be built. Three bands will be stationed in the stands until the race is over. The course within the enclosure will probably be oiled from end to end to settle the dust. The road through every control, and at every sharp turn and difficult street crossings, will also be oiled. When passing the towns which are neutral, the speed of the racing machines must be less than 10 miles an hour, as has been especially directed by the president of the district.

According to present arrangements the members of the different teams will be sent out in the following order: Germany, 1, 8 and 14; England, 2, 9 and 15; Austria, 3, 10 and 16; Italy, 4, 11 and 17; France, 5, 12 and 18; Belgium, 6, 13 and 19; Switzerland, 7. The colors of the teams are: Germany, white; England, green; Austria, yellow and black; Italy, black; France, blue; Belgium, yellow; Switzerland, red and yellow.

In order to avoid as much as possible collisions between cars after they have left a control, it has been decided to send the drivers away from the controls at an interval of 2 minutes should several arrive at about the same time.

During June and July certain sections of the law regulating the traffic of cars in the province of Brandenburg, in which Berlin is situated, will be suspended. It has been decided that all automobiles which are not registered in the police districts of the province must bear a police mark consisting of the letters "G. B." besides an identification number. They must be in black on a circular plate and attached to the back of the car. At night they must be lighted. This momentary ordinance does not apply to cars which already bear signs and numbers of their respective German or Prussian police districts. No duty will be levied on foreign cars bearing the G. B. plaque. Visiting foreign motorists have been requested to get the special G. B. plates made for the occasion and which are only accessible to foreign automobilists.

Three wireless telegraph stations have been erected at Saarlouis, Graevenwiesbach and Neuhof. They will be operated on the military plan, and a guard will be in front of each so as to prevent the people from bothering the operators for information. The telephone and telegraph service will be attended to by scores of operators taken from among those knowing French, English, Italian, Spanish and German. The press bureau will be guarded and there will be a large number of messengers on hand to help the newspaper men in case they want information from people outside the office.

It may be recalled that for a while last year after the accidents which marred the Paris-Madrid race it was greatly feared in all European countries where road races had been previously run that such events would not be permitted again. After the race in Ireland which came through without loss of life or limb the feeling of the first hour somewhat was quieted, but there remained formidable opposition against races on the public roads.

While preparations were begun by the German Automobile Club, which named a special committee called the James Gordon Bennett committee, some enemies of automobilism started a campaign against the race being held in Germany. It required the influence of such men as the Grand Duke Frederick Franz of Mecklenburg-Schwerin, Count von Tallyrand-Perigord, General von Rabe, and the direct appeal of several leading automobile manufacturers to at least prevent the emperor from stopping the race being held on German soil. At an audience which he granted to a delegation from the German Automobile Club he formally declared that before he would instruct the proper authorities that the necessary authorization be given, he wanted to know about the arrangements that would be made to insure the public against accidents.

It is a well known fact among well informed people that the kaiser was kept well informed on all the details concerning the race and that he expressed at several times the hope that the German industry would again win the event. He believes firmly that it will have an enormous effect on the home industry and it is as an evidence of his belief in the future of this new industry in Germany that he decided to see the race.

Among the members of the special German committee are Count Adalbert Sierstorf, who was also one of the German delegates at the Paris



CHARBON ON THE 20-HORSEPOWER PANHARD WITH WHICH HE WON THE FIRST RACE IN 1900

congress which was held December 16 last year, Dr. Levin-Stoelting, of the technical committee; Private Counselors Goldberger and Friedlander; Edouard Adler, also a member of the Automobile Club of Frankfurt-on-Main; Chevalier von Brandenstein, secretary general of the German Automobile Club; Count Clement von Schoenborn-Wieseneid.

At the Paris congress, where the general dispositions for the race were made, eight countries were represented. Clarence Gray Dinmore represented the Automobile Club of America; Enrico Marchesi the Automobile Club of Turin, Italy; Baron de Sulzer-Wart the Automobile Club of Switzerland; Count Adalbert Sierstorff and Chevalier von Brandenstein the German Automobile Club, Count Leopold Kolowrat and Secretary Carl Fasbender the Automobile Club of Austria, Baron de Crawhez the Automobile Club of Belgium, Count de Vogue and Chevalier Reue de Kniff the Automobile Club of France.

The emperor is coming. The emperor is not coming. The emperor is likely to come. Any one who will affirm something concerning Emperor William, unless it is a few hours before it happens, takes a very big chance. There is no man in Germany upon whom one can depend less than upon the kaiser, because he must often change his plans some half a dozen times within 24 hours. It has happened many times that the day before a certain event was to take place officials would inform the press that his majesty would be there and less than 6 hours later the contrary information would be sent out.

If nothing unars the present plans it is probable that the emperor will come to Homburg the day before the race and be present when the first car is sent away from Saarburg. Officials claim that if he comes he will probably remain several hours and return to the castle for rest and be back by the time the winner is supposed to have completed the last lap.

Another rumor is that the kaiser has invited the king of Italy and that the latter has promised to come. Prince Henry of Prussia, brother of the emperor, and many other members of the royal families of Germany and Austria are expected.

Some of those who will be present are: The Grand Duke of Mecklenburg-Schwerin, with the Princess of Cumberland, Grand Duchess Anna-

tasia of Mecklenburg-Schwerin, Prince and Princess Frederick Leopold, of Prussia; Prince Joachim Albrecht of Prussia, Prince and Princess von Pless, Prince and Princess Frederick Carl Hohenzollern; Prince Hohenzollern-Oehringen, Duke von Ratibor, president of the German Automobile Club; Count and Countess Manfred Matuschka, Count Voss-Schönau, Count von Frankenberg, Count Felix Chamarce, Count Tiele-Winkler, Count and Countess Johann Sierstorff, Baron Dr. von Bleichroder. Among others will be Marquis Chasseloup-Loubat, Paris; Baron de Rothschild, London; Clarence Gray Dinmore, Automobile Club of America; Baron and Baroness de Zuylen, president Automobile Club of France; Mrs. P. Leigh, vice-president Ladies Automobile Club of Great Britain and Ireland; Baron and Baroness Leitenberger, Vienna; Count Gruniedo, Paris; Lieutenant-Colonel Holden, president Automobile Club of Great Britain and Ireland; Count Wimpfen, Vienna; United States Ambassador Tower.

If all the automobile clubs which are planning to make runs to the Taunus district to see the race reach their destination, the total number of motor cars within the district will not be much less than 2,500 to 3,000, while the number of passengers thus coming over the road will be from 7,500 to 12,000. The following is a partial list of clubs which have made elaborate preparations for this purpose: Automobile Club of France, Automobile Club of Belgium, Automobile Club of Austro-Hungary, Automobile Club of Italy, German Automobile Club, Ladies' Automobile Club of Great Britain and Ireland, and about forty local organizations in Germany, France, Belgium, Austria and Italy.

The French club's tour is expected to be the largest in number and will start from Paris June 13, by way of Reims, Treves, Frankfurt and Homburg. The return trip to Paris will be over a different route. Another French caravan has been arranged by l'Auto. The members of this party will leave Paris June 12, via Nancy, Strassburg, Heidelberg and Homburg. The run of the members of the Automobile Club of Italy will start June 13 by way of Airolo, Arth, Zurich, Carlsruhe, Frankfurt and Homburg. The Ladies' Automobile Club of Great Britain and Ireland will come by way of Rotterdam, Utrecht, Cologne, Mainz, Frankfurt and Homburg.

Individual motorists of Great Britain have arranged a caravan which will start from London June 11. This will be the longest run, extending over 630 miles and passing through Newhaven, Dieppe, Rouen, Nantes, Paris, Metz, Luxembourg, Mainz and Homburg. The run of the members of the German Automobile Club will start June 12 from Berlin by way of Halle-a-Saar, Eisenach and Frankfurt for the small cars and by way of Weimar and Frankfurt for the fast cars.

Railway excursions have been organized by a great many of the important railway companies of France, Belgium, Germany, Italy, Austria, Great Britain, Holland and even Russia. The Automobile Club of France, and the Automobile Club of Belgium have arranged for a special train for their members exclusively. In Belgium railroad companies stipulated that there would have to be at least sixty applications.

There is little evidence at present that there will be reason to complain about overcharges in hotels. Months ago all kinds of statements were published concerning enormous charges, but investigation by members of the German Automobile Club, as well as of organizations with the purpose of seeing to it that tourists were not robbed, have reported that the hotel-keepers and private citizens were remaining within the bounds of reason. Rooms will be found at \$1 and upwards. Of course at the former price the room will not have hardwood floor, beautifully decorated walls and rich furniture, but they will have everything that is necessary for a night's stay. In the big hotels, where the prices will range from \$2.50 to \$25, the most modern furnishings will be found. For 50 cents one will be able to get a dinner, supper or breakfast which even a king would be willing to eat.

If every temporary garage should be filled with automobiles, there would probably be between 5,000 and 6,000 cars. The largest garage will be near the two grand stands at the start, and there will be room for about 2,000 machines. A force of 200 men will be on hand in this particular garage.

How many restaurants and buffets there will be is hard to tell, as they are being built almost daily. At present three large restaurants are ready. The management of the latter stated that he would complete arrangements to attend to 20,000 people. The other two expect more than 5,000 customers. There will be a regular scale of prices and it is expected the usual complaints of overcharge will be avoided in this way.

The program of events during the week of the race consists of the following events: June 16, weighing the racing cars; June 17, the race; June 18, excursion over the race course and banquet given by the German Automobile Club at Homburg; June 19, international track race meeting at Frankfurt-on-Main; June 20, automobile congress at Homburg; June 21, flower parade and elegance competition at Homburg.

In connection with the banquet, arrangements will be made for at least 500 people. It will be given in the banquet hall of the Kurhaus. The president and vice-presidents of the principal automobile clubs of Europe and of the Automobile Club of America have been invited as guests of the German Automobile Club. About 150 other prominent persons connected with the industry, sport and press have been invited.

# THE SEVEN CONTESTING TEAMS

## GERMAN TEAM

Baron de Caters.....90 H. P. Mercedes  
Camille Jenatton.....90 H. P. Mercedes  
Fritz Opel.....100 H. P. Opel-Darracq

## BELGIAN TEAM

Baron de Caters.....90 H. P. Pipe  
Lucien Hutvart.....90 H. P. Pipe  
Charles Augier.....90 H. P. Pipe

## NINETEEN ENTRANTS

## ENGLISH TEAM

S. F. Edge.....80 H. P. Napier  
Charles Jarrott.....85 H. P. Wolseley  
Sidney Gilling.....72 H. P. Wolseley

## AUSTRIAN TEAM

M. Warden.....90 H. P. Mercedes  
M. Wornet.....90 H. P. Mercedes  
M. Braun.....90 H. P. Mercedes

## SWISS TEAM

Charles Dufaux.....90 H. P. Dufaux

## FRENCH TEAM

M. Thery.....80 H. P. Georges Richard-Brazier  
M. Salomon.....100 H. P. More  
M. Bongier.....100 H. P. Turcat-Mery

## ITALIAN TEAM

Luigi Storer.....75 H. P. Fiat  
Vincent Lancia.....75 H. P. Fiat  
Alexander Cagno.....75 H. P. Fiat

## CARS OF TEN MAKES

## THE GERMAN TEAM

There was no trial race whereby to determine the German team, the club having selected two Mercedes and an Opel-Darracq. Of the exact construction of the former cars little is known, the character of the machines built for the race not having been made public at the time of writing. It is presumable, however, that they are of about 90 horsepower and very similar to the car which, as the first of the 1904 vintage of Mercedes racers, was brought to this country by William K. Vanderbilt, Jr., used by him to establish the mile straightaway record of 39 seconds on the Ormond beach last winter, and recently sold to M. B. Shanley, Jr., of New York.

The Opel-Darracq is made in Germany under license from the French Darracq company, and is substantially like the French car of that name. This cup-race car has a pressed steel frame with the four-cylinder motor covered by a large square bonnet, the sides of which extend backward to form a sort of cockpit for the driver. The engine has all its four cylinders cast separately. The bore is 160 millimeters and the stroke 140 millimeters. All valves are mechanically operated, the inlets being on top of the cylinders and operated by rock arms, there being but one cam shaft. Both low and high tension ignition are fitted, the former being supplied with current by a magneto. The drive is through a metal-to-metal clutch, three-speed forward and reverse sliding gear transmission and propeller shaft and bevel gears to the live rear axle. The wheel base is long and the car is hang low. It has both internal and external brakes on the rear wheels as well as a counter-

which gave Jenatton fame in automobile racing was his match race against Count de Chasseloup-Loubat at Acheres, France, in 1899. Jenatton was first to drive a motor car at a speed averaging 100 kilometers an hour. He started in the first James Gordon Bennett cup race, which was run in June, 1900, in France, driving a 10-horsepower Bolide car as representative of Belgium. He met with an accident when he was more than an hour behind the leader and retired. In 1902 he was a starter in the Circuit des Ardennes and bad luck again compelled him to quit. Last year he reached Bordeaux eleventh in the Paris-Madrid race.

Baron de Caters, Mercedes, is also a Belgian, and one of the leaders in Belgian automobile circles. He is president of the Automobile Club of Antwerp and holds other offices in different organizations. He has been racing for several years and has given several cups for speed contests. The best known is the Coupe de Caters, which is one of the principal events at the annual Nice meeting, in France. In 1902 Baron de Caters started in the Paris-Vienna race and reached the Austrian capital eleventh, driving a Mercedes heavy car. Later in the season he met with an accident in the Belgian Circuit des Ardennes, at a time when he was well up toward the front.

Fritz Opel, who will drive the third German car, the Opel-Darracq, is one of seven sons and was at one time among the three best bicycle riders in Europe. He has taken part in many automobile races and figured prominently in them. These were, however, mostly run in Germany and had few of the famous drivers from the continent among the starters.

## THE ENGLISH TEAM

Great Britain is represented by one Napier and two Wolseleys, selected after preliminary road, hill and speed trials on the Isle of Man.

The Napier is of 80 horsepower. It has a pressed steel frame and four-cylinder engine, the cylinder walls of which are jacketed by a single aluminum casting. The inlet valves are atmospherically operated, being of the Napier quadruple type. All the clutches have metal-to-metal friction surfaces. A high tension system of ignition has been adopted with the new synchronized Napier ignition apparatus. The tires are of the Dunlop non-skid style. A drip-feed lubricator, supplemented by a hand pump, is used. The transmission gear provides three forward speeds and a reverse, and is so designed that a direct drive is obtained on the high speed. A new design of live rear axle has been adopted, with roller-bearings, the thrust of the bevel gear driving it being taken by ball-bearings. The radiator has been considerably increased in size this year and is of the honey-comb type, provided with belt-driven fan. The circulating pump is chain driven. The wheel-base is 8 feet 8 inches. The car practically has no body back of the big square motor bonnet.

One of the Wolseley is of 90 horsepower, called the Beetle, because of its peculiar, flat body, and the other is a 72 horsepower car. The shell-like shield projecting forward from the front of the bonnet of the big car is not only intended to act as an effective wind cutter, but also to direct a powerful current of air through the large circular multitubular radiator. The four horizontal cylinders lie alongside one another.



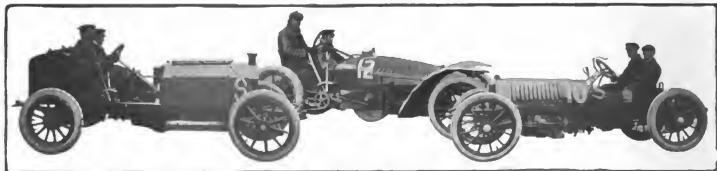
FRITZ OPEL, OPEL-DARRACQ

shaft brake, the system being very powerful. Camille Jenatton, driver of one of the Mercedes and last year's winner, is 33 years old and a Belgian by birth. Before becoming an automobilist he was a well-known cyclist and won several amateur road races. The first event

CAMILLE JENATTON, MERCEDES  
THE GERMAN TEAM

BARON DE CATERS, MERCEDES  
THE GERMAN TEAM





R. F. EDGE, NAPIER

CHARLES JARROTT, WOLSELEY  
THE ENGLISH TEAM

SIDNEY GIRLING, WOLSELEY

other, and in this respect they constitute a radical departure from previous Wolsley engines—including the 72 horsepower car. The cylinders project forwardly from the crank-chamber, and have atmospherically operated inlet valves. A very noticeable feature of these racers is the arrangement of the mechanic's seat on a very low level, with a deep well to accommodate his feet. In order to arrange for this, the speed change gear lies on the right side of the car, and it is only the differential countershaft that passes across to the other side. The engines on these cars are fitted with governors, but the governors are mounted in an unique position, being fitted to the rear end of the fan shaft. They act upon the throttle valves and are subject to the control of one of the hand levers that is fitted above the steering wheel, the other small hand lever alongside it varying the time of ignition. The main clutch is operated from the pedal through a rod lying outside the frame and the dust-proof casing. Provision is made for enabling the mechanic to prevent the clutch from slipping, if at any time it should tend to do so, and for this purpose there is a small hand-lever. The main fuel tank lies at the back of the car on a lower level than the carburetor, and there is a strong shield beneath it to prevent it from being fractured by loose objects flying up from the road. A pressure is normally maintained in this tank from the exhaust gases, and a hand pump is also fixed near the mechanic's seat for the same purpose. The speed change gear provides for four forward speeds and a reverse, is driven by a Renold's silent chain, and has its shafts mounted in ball-bearings. Dunlop tires are fitted.

All of the English drivers are well known to automobile sport. S. F. Edge, an old bicycle

rider, has long been identified with the Napier and has driven in several races on the continent. He won the international cup for England in 1902, when he defeated Rene de Knyff in the cup race section of the Paris-Vienna race. Charles Jarrott, Wolsley, has raced even more extensively than Edge, and on a de Dietrich finished in the first bunch in the Paris-Bordeaux section of the Paris-Madrid race. In the cup race last summer he drove one of the three English Napiers, but was put out of the race by an accident on a sharp turn.

Sidney Girling is less known to international sport, but is one of the British enthusiasts and a prominent figure in the automobilism of England.

#### THE FRENCH TEAM

The three French cars were picked from twenty-nine entrants by a trial race over the French Ardennes Circuit, in which only ten finished, many favorites being out of the running. The Georges Richard-Brasier, Mers and Turcat-Mery, chosen to represent France, finished this race respectively first, second and third.

The Richard-Brasier has an 80-horsepower, four-cylinder vertical engine. Side chains are employed for the transmission to the rear wheels. It has a square-shaped bonnet, of which the radiator, with its fans, forms the front. Magneto ignition is used. The car has three speeds, with a direct drive on the high gear. The valves are mechanically operated. The wheel base and track are 6 feet 9½ inches approximately, 3 feet 4 inches respectively. The front wheels are 32 inches and the rear 32½ inches in diameter. The steering connecting rods are in front of the front axle. The weight of the car is 972 kilograms—21,350 pounds.

The frame is of pressed steel. The car is fitted with the Truffault system of suspension, fitted to the springs, and has a braking effect on them. When the road wheel meets an obstacle the spring contracts, and the Truffault brake allows the spring to resume its normal position slowly, thus preventing the car from bouncing.

The Mers car is up to the limit for weight, scaling 1,000 kilograms, or 2,204 pounds. The engine has four vertical cylinders, the crank shaft being fixed a little to the left in order to prevent the crank being at any time on a dead center, whether the piston be up or down. Magneto ignition is employed, also side-chain transmission. The body has an inverted boat shape, and the radiator is fixed low down in front. The inlet valves are mechanically operated, and the frame is constructed of pressed steel. The gear gives a direct drive on high speed. The wheel base is 6 feet 8 inches and the track 3 feet 5 inches. The front and rear wheels have a diameter of 850 and 920 millimeters, respectively. Like that of the Richard-Brasier car, the connecting-rod for the steering-gear is in front of the axle.

The Turcat-Mery car is the lightest of the French racers, scaling only 950 kilograms—2,090 pounds. It has four vertical cylinders, and, like the two other selected cars, its transmission is by two chains. Magneto ignition is employed, and the valves, of which there are four to each cylinder, are all automatic. The gear does not provide for a direct drive on the high speed. The frame is constructed of armored wood, and the connecting rods for the steering-gear are in front of the axle. The wheel base and track are 6 feet ¾ inch and 3 feet 4½ inches, respectively. The diameter of the front wheels is 34½ inches and of the back 35 inches.



TUCKER, GEORGES RICHARD-BRASIER

M. SALLERON, MERS  
THE FRENCH TEAM

M. ROUGIER, TURCAT-MERY



BARON DE CRAWHEZ, PIPE

LUCIEN HANTVAST, PIPE  
THE BELGIAN TEAM

CHARLES AUGIERES, PIPE

They, who will pilot the Georges Richard-Brazier, is considered one of the old brigade, having made his debut in automobile races in the Paris-Amsterdam road race, in 1898, driving a Decauville voiture legere. He was not prominent in this event, but it served the purpose of introducing him to the requirements of the game. In 1899 he took part in the Tour de France and succeeded in getting second place behind Gabriel in this hard contest. Later on in the same year he drove a voiturette in the Criterium for these vehicles, again finishing second. In 1900 he won several events, the most important being the Bordeaux-Perigueux road race in which he finished first in the voiturette class. During the following season he returned to the voiture legere class and on a Decauville finished fifth in the Paris-Bordeaux race. He was entered for the Paris-Berlin race, but was sick at the time of the start. In 1902 They started in the Paris-Vienna road race and was among the leaders for several hundred kilometers. In going down a steep hill his brakes broke and the car made a complete somersault. They had but a few scratches, repaired the car, and finished the course. Later in the season he started in the Belgian Circuit des Ardennes and had a leading position when he ran into a cow, and as a consequence was out of the race. Before winter he went to Gaillon and broke the kilometer record for voiture legeres, being the first to drive a car of this class at an average speed of 75 miles an hour. Last year They took part in the Paris-Madrid

race and secured a good position at Bordeaux.

Salleron, Mors, is one of the latest to join the racing drivers' ranks. He made his debut in the Paris-Vienna race, in which he drove a Richard-Brazier light car. He was not prominent in this first attempt at fame, but last year in the Paris-Madrid race came within a few minutes of Gabriel, who won. At the time it was considered one of the best performances made in recent years in an automobile race, as Salleron had had several forced stops and yet managed to make up almost all his lost time.

Rougier, the driver of the Turent-Mery, has not taken part in more than three or four races, the first one being the Paris-Madrid race, a year ago last May. In his 40-horsepower car he finished ninth in Bordeaux, which satisfied the manufacturers, as it was merely a preliminary test before going into the building of more powerful cars. Last winter he made a record by climbing in his car the Ventoux mountain, one of the most difficult on the continent. Since then he has been working on the cup racers and has been trying them both in France and in Germany. At one time he was an enthusiastic motor tricycleist and took part in a number of races on the Buchet tricycle.

#### THE BELGIAN TEAM

All of the Belgian representatives are Pipe cars, the first really powerful racers of this make. The chassis is of armored wood. The transmission is by a magnetic clutch, bevel gears, and side chains. The ignition is high tension with accumulators. The motor cooling

is by a radiator placed low in front. There are four speeds and reverse and only one lever. The rear brakes are internal. The 90-horsepower motor is of the four-cylinder vertical style, cast in pairs. The valves are operated by the same cam shaft. The magnetic clutch was invented by Jenatry, and is called the "Goliath." This is the first time that this clutch has been tested in a race.

Baron Pierre de Crawhez is the president of the sports committee of the Automobile Club of Belgium, and also holds high positions with several local Belgian organizations. Much credit is given him for the splendid advancement made by the automobile industry in the little kingdom. The baron and his brother Jean have taken part in many important races within the last few years, but it was only last year that Pierre won an important race, the Belgian Circuit des Ardennes, driving a Panhard racer. He was also a starter in the now famous Paris-Madrid road and reached Bordeaux fourth. In 1902, when ahead of all the other competitors in the Belgian Circuit des Ardennes, the breaking of a chain during the third lap caused the baron to give up. He was, however, given the special cup awarded to the leader at the end of the first 100 kilometers, which he had covered in 1:02:25. The same year in the Paris-Vienna road race he finished fifth among twenty-five starters in the heavy car class.

Lucien Hantvast is a former bicycle rider and at one time was among the best in Europe.



M. WERNER, MERCEDES

M. BRAUN, MERCEDES  
THE AUSTRIAN TEAM

M. WARDEN, MERCEDES





THE SWISS REPRESENTATIVE—CHARLES DUFAX

He has taken part in many local events and in the Circuit des Ardennes, in which he was eleventh in 1902 and ninth last year. In the first of these races he drove a 12-horsepower touring car, his 40-horsepower Pipe racer not having been completed in time.

Angier is one of the old timers in the automobile riders' ranks. He took part in the Paris-Vienna road race and finished tenth on a Mors in the heavy car class. The same year, in the Belgian Circuit des Ardennes, he was seventh. Last year he ran in the Paris-Madrid race and reached Bordeaux thirteenth, while at the Ostend track meeting he won second prize in the mile standing start event, and fourth prize in the flying kilometer race.

#### THE AUSTRIAN TEAM

The three Mercedes which compose the Austrian team are substantially like the German Mercedes, being the product of the Austrian Mercedes company, which builds Mercedes cars from the designs of the parent company.

Werner, Braun and Warden have been driving German Mercedes cars for several years and are especially known on account of their performances at the annual Nice week meeting and for having figured well in the Semmering and Exelberg hill climb contests which are annually run in Austria, and in the Paris-Madrid race.

To Werner belongs the honor of having made the fastest time in the mile competition at the first Nice meeting in 1901. Braun was so seriously injured in the Nice-La Turbie hill climbing contest in 1900 that he was considered dead when picked up. He recuperated, however, but it is claimed that he lost much of his nerve thereafter. Last year he finished sixteenth on a Mercedes in the Paris-Madrid race.

Warden, in the Paris-Madrid, was the best of the Mercedes team of twelve starters, finishing first of this crew and fifth in the race.

#### THE ITALIAN TEAM

Italy's cars are all Fiats. The racing car weighs when empty 2,157 pounds and in of 75 horsepower. It has a four-cylinder vertical motor and transmission by two side chains from the differential countershaft to the rear wheels. There are four speeds under the control of a side lever, but there is no direct drive for the high speed. Magneto ignition is used and valves are mechanically operated. A pressed steel frame is used. The radiator is similar to that of the Mercedes. Italian Michelin tires are fitted.

None of the drivers is well known to the sport, although all have had considerable experience in driving. Alexander Gagno is said to be Queen Margherita's chauffeur. The other drivers are Louis Storeo and Vincent Lancia.

#### THE SWISS TEAM

Switzerland is represented by but one car, a 90-horsepower eight-cylinder Dufaux racer, built at the shops of Picard, Pietet & Co., in Geneva, Switzerland. The cylinders are cast in pairs and are vertical. In proportion to the length of the car, they occupy a rather small space. Although of great power the car is quite remarkable on account of its small size, which, the builders claim, will be a decided advantage over the bigger racers in such a race. The Dufaux brothers designed and built most of the parts of the car, it being claimed that only the radiator, ignition apparatus and tires were purchased in finished state. The racer is said to have cost nearly \$16,000 to build.

There are two systems of ignition, one being

by magneto and the other by accumulators. The wheels and the axles are upon ball bearings. The water tank is made of aluminum. As there is no tire factory in Switzerland, the Michelin company, of Paris, sent twenty men to Geneva, where a special shop was rented and four pairs of tires made. It is said that the cost of these amounted to \$2,000.

Charles Dufaux, the driver of the car, has been during many years the champion bicycle rider of the little republic. He has done little automobile racing outside of participating in some local runs and hill climbing tests.

#### THE TEAMS COMPARED

Never was such an aggregation of closely-matched cars pitted against one another. Except in the eyes of staunch partisans there has been no selection of favorites. As soon as the teams were selected the wise ones declared it anybody's race. Even the dark horse, the 90-horsepower Dufaux, from Switzerland, has not been placed outside the possibility of winning the race.

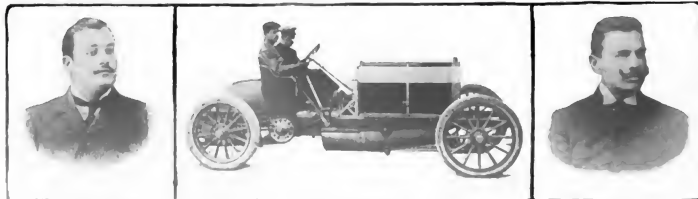
The nineteen entrants represent ten makes of cars, all except the Dufaux recognized as dangerous competitors in any kind of race and all except this and the English Wolseleys winners in previous big road events. The three Pipe cars representing Belgium and the three Fiats from Italy are next in degree of newness, but they have shown themselves in minor events to be in the class.

The Mercedes, of course, was early picked as having the best chance, on account of being represented by five cars, two from Germany and three from Belgium.

The Opel-Darracq, built in Germany under license from the French Darracq company, is the only Darracq to get a show at the cup, the French and English Darracqs, to the common surprise, having fallen down in the eliminating trials.

The Napier driven by Edge has had much backing on account of the previous performances of the pair and on account of its showing in the British trial race. The smaller Wolseley is the lightest and lowest powered car in the race, being of but 72 horsepower. Next to it are the three Fiats, 75 horsepower, and then the Georges Richard-Brazier, 80 horsepower, and the Edge Napier of the same power. All the other cars are of 90 or more horsepower. The cars are all comparatively heavy, the general average of weight being 2,000 pounds.

Those of the entrants that have previously competed for the cup are the Mercedes, Napier and Mors, only three out of ten makes entered in the classic.



VINCENT LANCIA

ALEXANDER GAGNO  
THE ITALIAN TEAM

LOUIS STOREO



## GERMAN CUP RACE COURSE

The international cup race is run over a circuit course selected by the German Automobile Club and whose use was authorized by the German government. It is in the wooded, mountainous portion of central western Germany, in the province of Hesse-Nassau and is in the immediate vicinity of numerous well known watering places. In the midst of picturesque hills, the scenery is characterized by castle-crowned peaks and wooded slopes.

The entire circuit is 137.6 kilometers—55.3 miles—in length, and as it will be covered four times, the total gross distance is 550.4 kilometers, or 341.2 miles. From this the neutralized stretches through important towns must be deducted to determine the net racing distance. These towns, enumerating consecutively from Saalburg, the start and finish, are Usingen, Weilburg, Limburg, Idstein, Esch, Königstein, Ober-Ursel and Homburg Heights.

There are certain points where the quality of wagon and tactical knowledge of the driver will be of the utmost importance in covering the course—critical points where the driver's judgment will either bring him close to the danger point or will help him to keep the lead over his rivals. At such points one will find the most interesting contests, but more important in the race are the long stretches of level road, where may be fought the real speed battles for supremacy.

The road as a whole is good, a few places excepted, and these have been improved for the occasion. The width of the course varies from 6.5 to 11 meters—21 to 36 feet—and at the narrower places the footpaths are utilized to give the participants a chance to pass one another.

In parts the race-course, where not surrounded by forests, traverses scenically beautiful country. At certain points the landscape becomes a higher picturesque panorama. The towns of Weilburg, Limburg, Idstein and Königstein especially gladden the eye of the visitor.

The road leading from Homburg is the old Napoleonic route, 10 meters in width, of which 7 meters is macadamized. It extends upwards through Dornholzhausen to the heights of the Saalburg. Shortly before this point is reached there is a curve to the right, which has been straightened out by removing the trees and shrubbery and thereby widening the road to form a suitable starting and finishing stretch. Here on the right and left have been erected the grandstands which will be connected by a bridge so that the racers will pass under this archway and spectators will be kept off the road.

About 100 meters back of the grandstand is the starting point. From here the road slightly elevates for about 200 meters; then goes for a long stretch down grade.

Just beyond the start is a knoll which quickly hides the racers from view. The sudden down grade offers the starters a chance to get under way quickly.

The road then turns to the left in a slight curve with a drop of 5 per cent and then rises about 1.5 per cent. This stretch offers a beautiful fast run. The road at this point is magnificent and should a car overhaul its predecessor

there is width enough for an interesting contest for preferred position.

The first town is Wehrheim. A viaduct has been built here to serve as a reviewing stand for the school children, school being closed for the day in honor of the race.

In this town is a very disagreeable turn, and the driver's ability to handle his car will be well tested. Just beyond the town is a slight upward grade.

Just as kilometer post 24.9 is reached the forest begins, and after entering it is a rather sharp curve, at a right angle to the left.

A few miles further on is an S-curve, whose turns are both at right angles. A delay is possible at this point, as the drivers will be compelled to use great care. A little farther on is another sharp S-curve down grade. It is assumed that curves with rising grades or on the level are easily mastered, but the curves with a down grade demand the driver's complete attention.

From here to Usingen there are a number of wide curves and an S-curve.

Beyond Usingen the road is fairly level and straight, although shortly after leaving the town there is an unimportant curve to the left and a very slight down grade; then a straight level run for a mile. Next is a wide curve to the right with up grade, and just after that an S-curve, left to right, with very steep embankment on the right hand side. At Kilometer post 30 is the top of the incline and the road runs downward on a curve to the right, becoming steeper turning to the left. It then rises again and reaches the top of another incline, then goes downward sharply. To the left is a forest. Then there is another rise, an S-curve, left to right, and the road becomes level for a distance. The road is next rolling until a curve at 33.6 kilometers is reached where it

descends, at kilometer 34.9 is encountered a bad S-curve which leads with a heavy down grade in two sharp turns, right to left, to Graevenwischbach. This is considered a critical point because, after a lively run, the road descends suddenly and great care is required. Immediately beyond this curve is a second, double curve, with steep down grade. In case of rain, brakes are not sufficient to keep the cars from sliding on these two S-curves and the speed must be lessened before reaching this place; consequently the entire distance from Usingen to Graevenwischbach must be traversed at a slow pace.

The entrance to Graevenwischbach must be equally slow on account of a steep down grade and a sharp curve to the left into town. This city is highly interesting from an automobile standpoint.

Steep streets, crooked roads, chickens, geese, pigs and their descendants are in abundance, though, of course, an effort has been made to remove all this live stock on the race day. It was intended to neutralize the streets here but the plan was abandoned, and if the streets are slippery drivers must be very careful not to come to grief by running into buildings.

Just beyond Graevenwischbach is a beautiful straight run. The scenery is pleasing. To the left is an imposing forest, to the right a broad, picturesque valley. After a curve to the right at kilometer stone 53, there is another straight run to kilometer stone 54 where there is an L-curve to the right.

Five kilometers further on the road turns into another L-curve to the right and here, at kilometer stone 54.7 is obtained a magnificent view of the mountains. At kilometer stone 56 the road descends steeply toward Weilburg and grows still steeper before entering town.

Through streets, partly down grade, this beautiful little river town is passed over a bridge crossing the river Lahn, and after a short,



GERMAN MINATURES, RUDE AND VON HAMMERSTEIN, AT THE SAALBURG RESTAURANT AFTER INSPECTION OF COURSE—CAR DRIVEN BY SECRETARY VON BRANDENSTEIN OF THE G. A. C.



LOUIS VON TALLEYRAND PERIGORD  
PROFESSOR HUBLEY  
SEPTIMIAN VON BUNNENSTEIN  
slowly-rising run the foot of the mountain is reached.

The race course continues through a beautiful, shaded roadway, which quickly takes a steep upward course, because the land here rises out of the narrow Lahn valley to the plateau between Weilburg and Limburg. This is on the right shore of the Lahn which must be crossed at Limburg.

The course still continues on the old Napoleonic war road which is of comfortable width just beyond Weilburg and after that broadens out still more, to the width of 11.5 meters.

At kilometer stone 59 is a slight curve to the right, and then is reached the heights, whence is had a most wonderful view of Weilburg and the Lahn valley. A curve to the left leads to a fine straight piece of road, continuing through the forest to kilometer stone 60.6. After another curve to the right is another straight run to 61.2 kilometers, where the road assumes the width of 11.5 millimeters; then we turn in a slight curve to the right and then into a straight, slightly rolling road to kilometer stone 62.5. Here the old Napoleonic route is left and the course turns with a curve to the left into the road to Limburg, which leads at once to the town of Allendorf. The entrance into town is down grade.

From Allendorf is a slight up-grade to a knoll, then comes an S curve, which on account of its down-grade demands great foresight. Continuing, the road to Heckholzhäuser is unimportant—n curve to the left, a slight rise, a down curve to the right and then a straight run.

Heckholzhäuser is entered over a narrow bridge, and 200 meters farther on, in town, is a narrow, right-angle curve to the left. This point can be passed at a moderate speed only, as the street at the centre of the curve is not very broad and the road beyond can not be seen. There is not much to be said about the short distance to Obertiefenbach. Immediately after leaving Heckholzhäuser the road ascends and



DRAWING ROOM IS THE CLUB HOUSE OF THE GERMAN AUTOMOBILE CLUB

at once strikes an L-curve, to the right. A little further there is a second one, to the right, and still another one to the left. Then there is a curve to the right and a straight run. The road is through a rolling, well settled district. Next is a curve to the left and then a fine straight run for a kilometer when there is a slight bend in the road which from here runs in a single line to Obertiefenbach.

This town is of great interest to the racers because the main street is winding, narrow and declines, demanding care and ability in handling the cars. The run from Obertiefenbach to Limburg is easily described. After a small curve beyond Obertiefenbach comes a good, even run for 3 kilometers, when the road dips downward, and then runs straight for 2 kilometers. Here is a curve to the left, then another straight run to the entrance of Limburg. This stretch of road is good battle ground and time lost on the Weilburg run may be made up. The contestants can see their rivals, and the road is broad enough for several cars to run abreast.

At the entrance to Limburg the road takes a downward course into the Lahn valley. Limburg, a town of about 9,300 inhabitants, is about in the center of the race course on the

main road from Koeln to Frankfurt, as well as on the beautiful and interesting road from Coblenz to Montabaur and to Limburg.

Just beyond Limburg, at the brewery, the road is slightly up grade and, though one flat curve follows another, the road is always visible. About a kilometer beyond Limburg, for a distance of 3 kilometers is a straight run to Kilometerstein, where there is a curve to the right and then a second one up grade and to the left. Then the road is almost straight road to Kirberg. Just before entering the town there is a turn to the right and then a piece of difficult road. The entrance into Kirberg leads over a narrow curve, down grade, to the right, and while it may not be a critical point, pru-

dence is necessary in negotiating it. Immediately afterward, at the Hotel Burg, the street turns at a right angle to the left, and about 100 meters farther on is a similar narrow, winding and up-grade street.

No sooner has this narrow pass, which continues down grade a short distance, been traversed than there is a sharp turn to the right, and then have been mastered the difficulties of Kirberg. Full or even half speed is out of the question in passing through this town.

Leaving Kirberg is a straight up and down grade road to a forest, continuing with scarcely an interruption for 13 kilometers. Huehner-Kirche is passed on a straight run, but an ascending road leading to Neubof. The street through Neubof is down grade and the exit from the town is around a sharp corner leading into a road considerably narrower but in good condition. This narrow roadway has been improved by extending it beyond the foot-paths.

From Neubof almost to Eschenhahn the road offers a good run, but at the great Eschenhahn curve a critical point is struck, because of its serpentine shape. It begins with a turn to the right for three-quarters of a circle, with considerable down-grade, and changes into a

narrow curve to the left and continues through a treacherous path. This curve and the immediately following narrow road are dangerous. After this curve the road continues down grade through the streets of the town, which offers nothing worthy of note. The road then begins to rise, but drops downward again towards Idstein. The entrance to Idstein is one demanding more than ordinary care, running in a serpentine curve.

After leaving Idstein a serpentine course goes through the forest up grade, and then on a straight, slightly rolling road to the point where begins the descent to Esch. This road is of moderate width, but is otherwise good for fast travel. The run through Esch is by a number of uncomfortably sharp turns. There are, leaving out the less important turns, three, all at right angles, at which the road ahead is hidden by projecting buildings. The street through this town is in fair condition, but as such streets are, as a rule, damp and slippery the driver must be cautious in making the turns. From Esch the course is over a hill to Koenigstein. Then is struck a narrow curve and an S curve, up grade; then a straight run to Glashuetten, the street of which turns to the left twice down grade. The latter curve is considered dangerous by local automobilists. Now there is a straight stretch to Koenigstein, while the road to Oberursel offers nothing exciting, there being a few upward, downward and flat curves. This road is in very good condition and offers a splendid opportunity to make headway. The ride through Oberursel is not a comfortable one, and is followed by a piece of road with unimportant turns, leading towards Homburg.

The final run back to the starting point is over a new roadway, expressly laid out for the race. This road leads in an even up grade, with slight serpentine curve to a point a little beyond Dornholzhause, which is to the left as passed. Then is a turn into the Homburg-Saalburg road, whence is a straight run to Saalburg, with a slight turn just before the starting point is reached and the circuit completed. H. Austin, of the Automobile Club of Great Britain and Ireland, who went over the entire Taunus road during the first few days of this month, made some interesting remarks at his return in London.

"It does not seem to me that the course is a very fast one, and, compared with the one upon which the English trials were run, it is strikingly similar. The fastest part will be a straight line between Weilburg and Limburg. There are many hills, bad corners and few straight stretches. It is a course upon which great care and watchfulness will have to be exercised and the speediest car will not necessarily be the winner. There are not so many controls as in my opinion there ought to be to insure perfect safety, although the country is not thickly populated."

#### AUTOMOBILES IN CEMETERIES

Cleveland, O., June 11—The association of cemetery superintendents of Ohio, of which Frederick Green of Cleveland is president, met last week and one of the subjects for discussion was whether or not automobiles should be allowed in cemeteries. About half the members of the association were against permitting automobiles in burial grounds on the ground that they are noisy, frighten horses and usually travel at too great speed. Other members were in favor of admitting them under certain restrictions.

## 500-MILE NON-STOP RUN

### Wridgway Drives Peerless from New York to Boston and Return in Rain and Mud in 33 Hours

New York, June 10—Charles C. Wridgway reached the Banker Bros. garage in this city at sharp noon today, having accomplished in a 24-horsepower Peerless car a non-stop run of 500 miles between this city and Boston. For 2 days and a night the plucky long-distance Anglo-American bicycle and motor cycle crack had driven his car through rain and mud without once stopping the engine and halting the car itself but a few minutes at a time in the first attempt that has been made in this country to establish a non-stop record for an American car worthy of note. It was his intention to start at once on another round trip so as to attain 1,000 mile figures, but the mud and rain and physical exhaustion compelled a postponement of the longer journey until more favorable weather conditions presented themselves. As it was he won for the Peerless car an American non-stop record of 500 miles. The distance to Boston from the Central bridge is 244 miles and from the Banker garage to the bridge is 6 miles. The total elapsed time was 33 hours on the trip out. Wridgway had as companions R. J. Johnson and Felix Brosnan, a chauffeur. From Bridgeport to Boston guides were carried in addition. Brosnan and relays of guides accompanied Wridgway on the home journey. The plucky driver stuck to the wheel the whole way and altogether made for himself a noteworthy endurance record. He attempted at fast time was made, a schedule of 18 miles an hour being laid out. Despite the storm, mud and night riding Wridgway was but 4½ hours behind it when he reached New York.

Johnson's story of the outward bound trip is as follows:

"We started from Banker Bros.' garage at 2:55 o'clock yesterday morning in the rain. It rained for fully half the way and left the roads muddy. We found the roads particularly bad around New Rochelle and generally at this end of the run. We reached Bridgeport at 6:35 o'clock, where we stopped 2 or 3 minutes, with engine running and took on A. E. Bradley to pilot us to Springfield. With Wridgway and myself was Felix Brosnan, a chauffeur. We three rode the entire distance to Boston. Wridgway operated the car the whole way.

"Just out of Bridgeport we had a punctured tire, but we put in a new shoe and inner tube in 24 minutes, the engine run-

ning all the time. We reached New Haven at 8:15 and Hartford at 10:40. At the latter place we took on fresh cans of lubricating oil, Felix having poured all our stock in en route. At Springfield, which we reached at 12:30 o'clock in the afternoon we took on a man to pilot us out of town.

"At Palmer we lost our way and went 5 miles on the wrong road, thus losing 10 miles in all before we got straightened out again. We got to Worcester at 3:45 p. m. It was raining then like the mischief, but we made the 50-mile run to Boston over splendid macadam in 2 hours. At the Peerless garage there was a crowd awaiting us.

"Our punctured tire and lost way were really the only incidents of the run. The engine acted splendidly, never stopped running an instant, nor missed an explosion. We carried sandwiches and coffee for food supply. There was no attempt to reduce weight on the car. Each man had a grip and the car had a full complement of lamps, tools and extra tires."

Wridgway has the following to say of his night ride home:

"We left Boston at 6:15 p. m., and made good time to Worcester, where we arrived at 8:30. Another four hours of traveling brought us to Springfield, and, although we had some trouble finding our way we were still well up with the schedule which I had laid out before stopping.

"We left Hartford at 2:45 a. m., and then found that the heavy day's rain had played havoc with the sand and dirt roads to be found between here and that city. They were bad enough on the way out, but they were infinitely worse on the return. I had hard work keeping the car from skidding into the ditches and the road was so heavy that I traveled on my second speed most of the time. We reached Bridgeport at 6:35 a. m., and found the streets in that city in bad shape.

"Finally we reached the home garage at exactly noon, and as I had decided that farther travel with the prevailing condition of the roads would be inadvisable, I shut off my spark. My engine, after 33 hours of continuous operation stopped working. I feel none the worse for my 500-mile drive, except that my shoulders and knees are rather stiff; but I think that a few hours of sleep won't do me a bit of harm."

While Wridgway does not say so, it is reported that when the roads get in good condition again he will make another try.



THE WRIDGWAY 500-MILE NON-STOP PARTY



# MOTOR AGE

Published Every Thursday by  
THE TRADE PRESS CO.

1303 MICHIGAN AVENUE, CHICAGO  
Telephone Calumet 7911

New York Office, 140 West 38th Street,  
London Office, Anticam Publications Bldg.,  
Room 19 Manor Park Rd., Harlesden, N.W.

MEMBER NATIONAL ASSOCIATION OF AUTOMOBILE MANUFACTURERS	MEMBER CHICAGO TRADE PRESS ASSOCIATION
--	---

Entered at the Chicago Post Office as Second Class  
Mail Matter

**Subscription, Two Dollars per Year**  
Foreign Subscription, Four Dollars

Any Newsdealer may obtain Motor Age through the  
Western News Co., Chicago, or any of its  
branches, on a returnable basis.

## DEALERS ORGANIZED

**T**HE organization of the National Association of Retail Automobile Dealers was started soon after the national shows last winter and has progressed steadily although quietly. The formal organization has been completed, officers elected and committees appointed. The association is ready to work.

The officers are now seeking diligently to widen the membership, it being primary to the success of the ventures of the body, in whatever line they may be, that the membership is large and active.

There is much work for such an association to do. The N. A. R. A. D. should have the support and co-operation of dealers throughout the country.

The purposes of the association may be toward both internal and external reforms, the one leading up to the other.

That certain internal reforms are necessary to the permanent well being of the trade is obvious. They cannot be brought about by drastic measures. This is not a time for iconoclastic action.

The suggestive method is better.

Band the automobile dealers of this country into a healthy and effective organization, whose initial endeavor is to correct exterior evils, and the spirit of co-operation that is bound to grow out of this combined effort will speedily and quietly bring about a spirit of fairness of one tradesman to another that will nip in the bud any tendencies toward internal strife and unhealthy competition.

If the association does no other good than to make of its members one clan it will have done enough.

Let the N. A. R. A. D. inaugurate an era of co-operative brooding.

## USE OF WHEEL BASE

**L**ET a man place himself for a short while at any point where touring cars are likely to pass by in goodly numbers and out of every ten that go by he will find that in the case of eight the center of gravity of the tonneau loaded with passengers is back of the rear axle.

Especially is this true in the case of foreign machines.

Once in a while the extreme is found in a car of about 5-feet wheel base whose motor

bonnet is so long that the driver's seat is but a short distance ahead of the rear axle and the rear seats so far back of the axle that when loaded the weight in the tonneau is all behind the axle.

It may be all right, and then, again, it may be all wrong.

Automobiles to come into their full heritage must be adapted to particular needs.

Customs may be changed some to meet the automobile part way, but the very human desire for extreme comfort cannot be altered a whit.

There is no shadow of doubt that there is more comfort in a car whose both seats are between the wheels than in one whose rear seat is back of the rear axle.

It may not be practicable to so build a car that both seats will be well within the wheel base, but it seems a wrong utilization of a long wheel base to devote over half of it to the motor and thereby commit the human flesh element to be contended with a perch over the rear axle.

MOTOR AGE is not posing as a designer of motor cars. It merely urges the idea that there may be more fun than sense in paying so much attention to motor that it takes all the possible skill of upholstery to make seats worth sitting in on account of disadvantageous location.

Among the most comfortable cars ever built were the old Winton and Haynes-Apperson surreys—homely, perhaps, but built to ride in.

It would be folly to go back to old carriage styles of construction. They have been proven inferior.

Yet there is opportunity in design to better proportion cars with view to placing seats in more naturally comfortable positions than they are in many of the cars of today.

The side-door tonneau is without doubt a step in the right direction, for it necessarily puts the rear wheels back relative to the tonneau seats. Any other designs tending in the same direction are welcome.

## EDITORIAL HONESTY

**S**EVERAL weeks ago a manufacturer wrote to MOTOR AGE offering to purchase a certain amount of advertising if MOTOR AGE would in return publish a certain illustrated description of the article to be advertised.

The proposal was in the form of a direct trade. It was refused.

In declining to accept the advertising order with the direct understanding that the description of the article would appear in the reading columns of the paper, MOTOR AGE inferred no slight upon the maker or his goods. It simply emphasized the policy it has consistently pursued in absolutely divorcing its business and editorial departments.

Believing that its readers are interested in descriptions of new goods, MOTOR AGE publishes such descriptions. No doubt they possess advertising value. This is incidental. They are not written as either advertisements or criticisms but as straightforward explanations of the construction involved.

In one sense to publish such a descriptive article from editorial choice is no different from publishing it as a factor in a commercial bargain with an advertiser.

In the true sense of editorial honesty it is a whole lot different. The minute a paper makes its reading columns a trading stamp given for advertising purchases it breaks faith with its subscribers.

MOTOR AGE prizes its subscribers. It has no desire to try to palm off on them forced "reading notices" as selected matter.

MOTOR AGE does not intend to confuse its reading and advertising pages. A fair price is placed upon the latter and the former are not for sale.

This is done not merely to set an arbitrary rule. It is for the good of the trade. There can be no permanent value to anyone in persistent and sweeping prostitution of the reading pages of a trade paper.

Readers are not fools. They are perfectly aware of the difference between the "write-up" for sale of business policy and the honest publication of optional matter. They cannot long be misled.

To support such a policy of close guardianship of the reading columns may at times necessitate the enforcement of a hard and fast rule which seems inconsistent to the advertiser.

To break a rule at all is to kill the rule. In refusing to trade descriptions for advertising patronage MOTOR AGE does not pretend to pass judgment in any way upon the article in question. It does not consider this phase of the matter at all.

Whether the article be obviously good, bad or indifferent is not reckoned upon.

The issue is the use of the reading columns of the paper as a means to secure advertising.

MOTOR AGE sincerely believes its policy in this matter to be for the best good all around. In enforcing it there is no desire to antagonize advertisers, who, incidentally, have been accustomed to a different procedure in the case of a majority of trade papers.

MOTOR AGE only endeavors to set a policy the following out of which will make it a stronger and more valuable trade medium.

In doing this it is hoped that the trade will co-operate with it. The less differences there are between trade and paper the better for all concerned and the sooner a common understanding is reached the sooner will the maximum of results for all concerned be obtained.

MOTOR AGE trusts that the trade will take a fair view of the matter.

## CHICAGO CLUBS OPPORTUNITY

**F**OUR city officials of Chicago seem willing to submit a new ordinance governing automobiles; they propose to raise the speed limit from 8 to 12 miles an hour, and, notwithstanding the fact that the courts have said it is illegal to exact a license fee, they propose to get the money under the title of "registration fee."

Without opposition this will be passed and the whole proposition must be thrashed out in the courts again.

In days of old, when cyclists were banded together to fight any and all common causes, such matters were nipped in the bud.

Every automobile owner should protest against the passage of an illegal measure.

There should be no compromise when a court's ruling is barking the light.

Class legislation never was legal—the proposed ordinance comes under this head, regardless of the terms used.

The Chicago Automobile Club pretends to voice the automobile sentiment and is recognized as the sponsor for all things motoring in Chicago.

Now will it grasp the skirt of Opportunity and hang on?



## JUMP SPARKS

Quoted from a paper of McKeesport, Pa.:  
 "A derrick was required yesterday to extricate a team of horses and wagon, owned by P. J. Hoerr, from mud in Versailles avenue, near the new Whites bridge. The eastern approach to the bridge is filled ground, and the recent rains rendered it spongy. The team sank into the soft earth to their bodies and were unable to move." Country papers which are "knocking" the automobile-good roads movement please copy.



Not this time, either, gentlemen!

Who will be the first to build a sixteen-cylinder racer?

How many times will you hear "I told you so" during the next 2 days?

Don't worry about that A. M. L.-A. A. ... merger. Leave it to Potter and Whipple.

There are fifty automobiles in Battle Creek, Mich. Selling health foods seems to be profitable.

That "day nursery" parade in Cleveland was a great success. "Here's looking at you" over a nursing bottle!

Thirty-six New York boys have been arrested for stoning automobilists. It's a shame Missouri has not some of this talent.

There were about 6,000 people at the initial automobile track meeting in Australia. Hippodrome managers are missing rare opportunity.

Having worked the sanded sugar game to a finish the country groceryman now indulges his sense of humor by selling kerosene to automobilists as gasoline.

If St. Louis can't find sufficient garage accommodation for the tourists who will arrive in August, it may be well to remember that there is a large stock yards just across the river.

The Farmers' Club of Indiana is pretty reasonable—for farmers. It approves of automobiles but dislikes scoreboards and suggests a state speed limit law. That will come—and go—in good time.

Race meet promoters would do well to run all races promptly this summer. For the good of the game contestants must be taught that they must be on hand to start when called if they are to start at all.

If those who contemplate making the St. Louis tour keep on bearing reports of frightful roads they are liable to stay at home. It would take a good descriptive writer to picture even the Illinois roads worse than those east of Cleveland, if reports are true.

It was a wise provision that was incorporated in the rules for the Vanderbilt cup race that for the first 2 years the event should be held on American soil. There's a chance to hold it here for a time, at least.

Talk about New England chivalry! The police of Hartford, Conn., not satisfied with arresting all the prominent men automobilists for fast driving, hauled in a young woman operator—and fined her, too.

Somebody has suggested that the proposed American Motor Association shall relinquish the control of racing, but Somebody evidently didn't remember the fate of the League of American Wheelmen.

There won't be any necessity for a 1905 endurance contest—the St. Louis tour will be sufficient in that line, even if it doesn't bring so much good advertising to the makers.

The average citizen who doesn't own an automobile can at least get into the game by howling about excessive speed and suggesting remedies in the shape of laws.

Maybe farmers are against good roads on the ground that they will deprive them of hauling an automobile occasionally at about \$10 per.

Nowadays if a dealer can't sell machines all he has to say is that he can't get any from his factory, and the best of it is the story goes.

The last place on earth—Somewhere, Tenn.—has just seen an automobile for the first time, and the excitement hasn't died out yet.

By the time Augustus Post gets through inspecting the roads to St. Louis they ought to be known as Post roads.

Look out for air-cooling. This is the year it is scheduled to demonstrate its fitness.



Cleveland—parade—500 automobiles in line. That's the way to do it!

Well, anyway, we may be able to scare up a team for our own Willie K. race.

How would it seem if the 1905 Gordon Bennett race should be won by an air-cooled machine?

It's pretty near time for Senator Morgan to spring another new track scheme. Nothing doing, Senator?

This is the year for the racing board to distinguish itself as an enforcer of rules. One George D. Gideon might furnish some suggestions.

It is really remarkable that none in the trade has sprung the "Unecda" repair shop or the "Unecda" spark plug. Every other trade has its little "Unecda" gag.

It takes more than a court's ruling to down a Chicago official. A little rhetorical gerrymandering does the business and gets in the little \$3 "registration" fee in lieu of the little \$3 "license" fee.

The mayor of Oswego, N. Y., has notified the automobilists that they must not blow their horns on Sunday. Does he mean the horns on their cars, or is he trying to emulate Carter Harrison's enforcement of the anti-sipping ordinance?

Homburg, Germany, June 17—Special cablegram—A little funny fellow who says he publishes all the automobile papers in America has protested the order of starting the cup race and insists on being made clerk of the course, starter, referee and president of the German Automobile Club—Count Chassis de Garage.

Chicago has organized numerous improvement associations, whose chief object is to maintain gangs of white wings for the purpose of keeping the streets clean. It is a laudable undertaking and should be encouraged; but the very people who are putting up band-some to support these organizations should bear in mind that it is not the automobiles that necessitate this work, but, rather, the good and noble horse.



## CLEVELAND'S FIELD DAY



FORMING THE FLORAL PARADE

**C**LEVELAND, O., July 11—Although suffering the handicap of being a postponed event, the automobile field day held under the auspices of the Cleveland Day Nursery and Free Kindergarten Association was by far the most eventful day in the history of automobilism in this district. First there was the biggest automobile parade ever held in these parts, and then there was a list of unique and interesting track events, the like of which had never before been witnessed by Clevelanders. The weather was ideal and the attendance at Glenville was more than satisfactory to the promoters of the event.

Despite the drawbacks that came from postponement, the parade was a tremendous success. Fully 500 automobiles took part and the parade would doubtless have been much larger had the decorated cars been permitted to participate in this part of the program. Like the circus manager, the committee in charge declined to exhibit the best stunts in the freestreet parade.

There were five divisions to the parade; at least there were that many when it started. First came Grand Marshal Tom L. Johnson.



MRS. HENRY DREHER

mayor of Cleveland, in his car that has seen more touring than any half-dozen in Cleveland. Back of the mayor was a large White steam truck, which carried the wind-jamming aggregation, together with a banner proclaiming the event. Following this was the electric division, runabouts in the lead, followed by larger cars; then came the steamers; after these the light gasoline cars, then the heavy touring cars and finally a number of commercial wagons and trucks. The various divisions were in charge of Ralph Owen, Clarence Brockway, George S. Waite and Walter Baker, all well known tradesmen. It was a difficult task to form them, but the parade moved off on time. The start was from a point about a mile out Euclid avenue and the route covered several down-town streets; through the public square, past the city hall and back out Euclid avenue to the boulevard, following this for about 2

miles to Glenville, where the track events were to be held.

For the first few miles the pace was a nice, ladylike, 8-mile-an-hour rate with every car in line, but the big touring cars soon got tired of trailing along behind the electrics and runabouts and many of them pushed to the front. This made Mayor Tom ambitious to shine, and he let out a few links which soon put the big band wagon and the little electrics far to the bad. Across the boulevard it degenerated into something of a go-as-you-please road race. At Glenville the head of the parade was halted and the cars admitted to the track four abreast.

It was when all were on the track that the tremendous aggregation of cars was fully apparent and it formed a picture the like of which was never seen in this city. After the grand review the cars were relegated to the fence sides and the track events began.

The first event was the obstacle race, and in this was fully demonstrated the remarkable control which a skillful driver has over even a large high speed touring car. The broad home-stretch made a splendid course for such an event. Barrels were placed on an automobile's width apart at irregular intervals, and in the center was a cage, the trick being to enter and back out around barrels placed at the rear of the car. Walter Baker, an old timer at a game of this sort, was an easy winner in this event, covering the course in 1:20 without a hesitation and without grazing an obstacle. Douglas Chisholm in a Baker practically repeated the performance, but in slower time. Miss Oriana Stephens, a pretty little maid in short dresses, went over the course with only one touch, while Miss Jeanette Kinney in a heavy car also made a clean record. Harry Toomey in a Winton touring car made an excellent showing for a large car.

The floral parade was easily the feature of the afternoon and was one of the most beautiful displays ever seen. Thirty cars took part, thirteen electrics, eight steamers and nine gasoline cars. Every one was beautifully and tastefully decorated with natural and artificial flowers, while the occupants were attired in harmony, many of them carrying pretty parasols. The cars circled the oval twice, presenting a beautiful galaxy of shades and colors that will not soon be forgotten. Then the various types were separated and drawn up at the tape for the awarding of prizes. It took the judges a



MRS. J. J. TRACY—FIRST PRIZE FOR STEAMERS

MR. F. B. STEVENS—SECOND PRIZE FOR GASOLINE CARS



MRS. FRANK MEAD

MRS. L. W. PRIOR

long time to pick the winners and it was a task that none of them relished. The prizes were to be awarded on points of general effect and attractiveness and it certainly was a task better suited to an artist or perhaps a milliner, rather than to staid business men.

Mrs. Hall D. Hill, in an electric phaeton uniquely decorated with sprays of wheat and red flowers, was given first prize for electricies, while the second went to Mrs. Henry Dreher in a Baker phaeton that was literally covered with pink roses, the only relief from this shade being the number of the car, which was done in white roses on the back of the body. Mrs. L. W. Prior won third with a car decorated with red poppies and huge paper butterflies.

In the steamers, Mrs. J. J. Tracey won first prize with a car all in white, a white-finished White, covered with white chrysanthemums and shaded by a huge umbrella in white. Miss Ella White had a car covered with evergreen and decorated with red peonies. Mrs. W. H. Canniff and Mrs. F. W. Wardwell won third in a car decorated with chrysanthemums and smilax.

Mrs. I. F. Newman won first for gasoline cars; her machine being buried in red poppies, forming the most striking display in the parade. Mrs. F. B. Stearns had a beautiful car decorated with pink, white and yellow roses and ribbons. Mrs. John Huntington's car was decorated with red peonies and ferns and secured third prize.

The children's parade was a most attractive event. Some fifty children in twenty Baker electricies of various types participated. The youngsters were all dressed in white, wore red ribbons, and carried American flags. They had been drilled by Mr. and Mrs. Walter Baker and Fred White and they went through a series of intricate evolutions in a most pleasing manner, with never a break nor pause. They concluded the drill by facing the grand stand and doing stunts with American flags to the tune of Star Spangled Banner.

In the mile exhibitions, Louis P. Moores led off with a 35-horsepower Peeples touring car and with a loaded tonneau made 1:40.4. Frank H. Stearns with four passengers in his big new four-cylinder Stearns did 1:31, while Edward Sherman with a Royal four-cylinder did 1:59. Barney Oldfield brought out Bullet II, and made 2 miles in 2:00.2, the first mile in 1 minute flat.

From a racing standpoint the interesting feature of the day was the 5-mile exhibition by Alexander Winton. Not since the Gordon Bennett race of a year ago, when he announced that he had retired for good, has the veteran mounted a racing car, and his appearance was due only to a desire to aid in a worthy cause. After a 2-mile warming up the eight-cylinder Bullet settled down to a steady dust-raising grind that beat anything ever seen in Cleveland. The old champion is not the spectacular driver that Oldfield is. He doesn't make the hair-raising slides around the turns as does the champion of champions; in fact, he has a trick of setting the brakes as he crosses the tape for the upper turn; but he can unquestionably get out all the speed that the Bullet possesses, as demonstrated by the fact that every mile in his exhibition was faster than either made by Oldfield with the same car. The times for 5 miles were 4:55.2; by miles 1:58.4; 1:59.3; 1:59 and 59.4.

The slow race brought out a large field. They were supposed to run on the high speed gear, but according to the judges every man in the lot tried to hedge with the result that all the cars were stopped and no race declared.

The start-and-stop race was easy picking for Harry Toomey, with a Winton, who had evidently practiced up. The game was to start with four passengers dismounted, crank the car, and start. This operation was repeated at each quarter. Toomey won before the others had left the three-quarters pole.

Owing to the lateness of the hour, the other events on the program were called off. The exhibition of old time cars would have been interesting, as there were a number of them ready for the event.

Not an accident marred the day's sport, which was a success in every way, and the charitable object which induced the event harvested a handsome sum as the result of the efforts put forth by the committee of ladies and the members of the Cleveland Automobile Club.

#### CHANGE PLAN SOMEWHAT

New York, June 11.—There has been one change in the programme of the Federation of American Motorcyclists' 6 days' endurance contest, July 2-7. In place of the 100 miles paced regularity run, which was scheduled for July 4, a 1-quart economy road test has been substituted. This will provide a day of comparative

rest after the long ride over the Hudson valley hills to Albany and return on the two previous days. In the economy test the competitors' tanks will be supplied with a measured quart of gasoline and they will then follow a pacemaker until one by one they drop out.

The rules to apply to the starting, stopping and slow speed trials July 5 are as follows:

Starting—Competitors will mount and, at the signal, will pedal and apply motive power; the times will be taken from the word to the sound of the first explosion, and the operation must continue regularly until the referee orders a halt. Each competitor will be given two trials, and the average time will decide the award of points—100 being the maximum for the best average.

Stopping—Competitors will follow a pacemaker equipped with speed indicator, and when a speed of 15 miles per hour is attained will, at the command "brake," cut off power and apply his brake or brakes and bring his machine to a stop. Awards will be made on the basis of 100 points for the stop in the shortest distance.

Slow speed—Competitors will ride a measured course of 100 yards without pedaling, racing of engine, intermittent application of power or release or partial release of compression. The slowest performance will earn 100 points.

In the hill-climbing trials the greatest speed will not be sought. A time limit will be set and all who fall below it will be penalized one point for every second or fraction thereof.

The day's run from New York to Albany, Albany to New York, New York to Wilmington, Del., and Wilmington to Cambridge, Md., each taking a day, will be scored on the established system of adherence to time tables worked out on a basis of 15 miles per hour. Only roadside repairs and adjustments will be permitted. Each night the motor bicycles will be stored in the custody of the referee.

In this year's contest three series of awards will be made—those who participate in the events of the first 4 days, the last 4 days, and the entire 6 days. Competition for the grand prize—the diamond medal—is restricted to the latter class.

The committee in charge is composed of Will R. Pitman, the eastern member of the F. A. M. competition committee; H. J. Newman, Alpha Motorcyclic Club; and R. H. Nickerson, of the New York Motorcyclic Club. R. G. Betts, president of the F. A. M., will referee the event.

## BOWDEN WINS HERALD TROPHY



CARS BEING TUNED UP BETWEEN RACES AT THE BOSTON MEET AT THE REARVILLE TRACK

**B**OSTON, June 13—The postponed Decoration day meet ended to-day in a blaze of glory in the presence of 15,000 people, who saw H. L. Bowden snatch the Boston Herald trophy from Paul Sartori, a battle between two nerry drivers in two 60-horsepower Mercedes machines.

The honors of the afternoon were pretty evenly divided. Bowden besides capturing the Herald trophy, also took the Fosdick cup offered for the fastest mile of the afternoon and captured second prize in the 10-mile open. William Wallace captured his two maiden races, the club championship and the 5-mile class B, and seemed to have the advantage in the pursuit race, which came to a sudden close owing to his machine turning around at a most inopportune time. Sartori, driving for Alfred Vanderbilt, captured the 10-mile open, and finished second in the Herald trophy race. Frank Durban took the steamer race, and A. E. Morrison won the touring car race, with Hollander second.

When the first heat of the cup race was announced, from the paddock came two powerful machines. One, painted white, was the 60-horsepower Mercedes, driven by Bowden, looking as though it could cut up the little brown fellow travelling alongside and known as the Stevens-Duryea Spider, having 14 horsepower, and driven by Otto Nestman. They were given a flying start, and together the two scurched across the tape. The Spider jumped to the lead with surprising rapidity, but once the turn into the backstretch was made the Bowden car got its full speed ahead and together the two turned into the homestretch.

Down the stretch, raising a cloud of dust that hid them from view, once they had passed a given point, the two went down to the tape, and just as they got under the wire, Bowden forged ahead. He raised so much dust that it was impossible for Nestman to see what he was going into, but still the plucky fellow kept at work, eating dust and getting every ounce of speed possible out of his car. Bowden in the third mile got a good lead over Nestman and then he coasted around the turns, not caring to take chances in making them with his power. He kept right along and steadily increased his distance, until while rounding from the back on the sixth mile the left rear tire came off his wheel and was seen to roll along the track.

Nothing daunted, however, Bowden retained his speed, and with three tires, and on the rim of his fourth wheel, he traveled the remainder of the distance, taking fearful chances of side slipping and possible dangerous accident. He was master of his car every moment, however, and while Nestman gained on him after this, Bowden crossed the tape a winner of the heat in 10 minutes 32.15 seconds. Miles in this heat were ridden under the minute mark, the

second mile being covered in :59.1-5, which was the fastest mile of the day and gave to its maker the Fosdick cup offered for the fastest mile made during the meet.

In the second heat the Vanderbilt car, 60-horsepower Mercedes, driven by Paul Sartori, came out to fight against the 10-horsepower Franklin, driven by Winchester. Sartori got the lead at the very start and fairly ran away from his competitor, whose machine seemingly was not performing as well as it should, it traveling on three cylinders only and missing explosions. It was evident that it had not



BOWDEN WINNING FIRST HEAT HERALD CUP

fully recovered from the effect of its trip from Philadelphia, and its more recent trouble at Readville. However, its driver put up a game, losing fight.

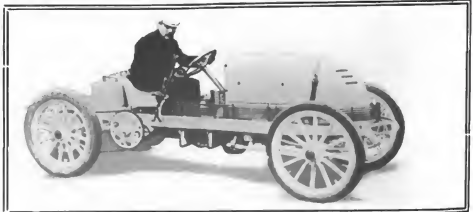
Then came the final. The meeting of two of the speediest cars on the track, the Bowden and the Vanderbilt machines, both capable of doing miles fractions of seconds under the mile and of making the best race imaginable.

Sartori had the pole, and with Bowden alongside and half a length to the rear, both came across the tape and were given the signal.

Bowden was traveling the faster at the pistol and immediately shot to the fore, taking the pole at the turn from the homestretch and for the first time during the races Sartori had to take a little of the dust. It was thick indeed, just as thick as if he had been to the fore, and he enjoyed it no more than did others who had tried the same trick. With a clear field ahead Bowden got into his fourth speed on the backstretch and cut loose, opening up a gap of over 150 yards on Sartori, who was slowly traveling in the dust raised by the Bowden car. Bowden, well assured of his leading position, displayed his generalship by taking the turn at a coast, and using his fourth speed on the straights, thus assuring himself of almost perfect safety. There was no need of his using his speed at all portions of the contest, as Sartori was not traveling as speedily as he might, he evidently not caring to take too many chances by traveling, as he would have to, blindly through a thick bank of dust.

The race at the 5-mile mark was a pursuit race, pure and simple, and so far as the spectators were concerned it looked like two balls of dust, separated by about half a mile, chasing each other around the track. They were traveling fast, averaging about 1 minute 4-5 seconds to the mile. The dust raised over the track in a circle, and were one to look into the heavens he would have found a duplicate of the track raised on high, so thick and well did the dust travel. All things, however, have an ending, and in due season Bowden crossed the tape a winner of the trophy.

Then came the 5-mile race for the club championship, open to cars irrespective of horsepower or motive power, the same to be driven by bona-fide members of any recognized automobile club of New England. The first heat brought out H. Ernest Rogers and his 24 horsepower Peerless car, and George Otis Draper and his 20-horsepower Packard. The Rogers car was by far the speedier vehicle.



H. L. BOWDEN IN HIS MERCEDES

it being stripped down to semi-racing form, while the Draper car was in apparently full touring form. Rogers had the heat well in hand from the start, and won with considerable distance to spare.

The second trial brought out Louis S. Ross, with his aluminum torpedo-shaped steamer, and Frank Durban with his red painted, cigar-shaped steamer, both new fangled machines that were promising of considerable speed and close competition. Ross had the pole at the start, with Durban alongside, and rounding the turn into the back the torpedo, whose polished form threw back the rays of the sun, fell about 15 yards to the rear, and it looked as though Durban would get the advantage. Before the half-mile mark was reached Ross regained his strength and speed, and went dashing up the stretch, getting even with Durban, and giving him a good hard run for the turn, managed there to take the pole in the lead, and come flying down the stretch. The torpedo seemed imbued with new life and fairly skimmed over the surface, while the red fellow was not going slow. It was readily seen that Ross had the race well in hand and with a clear track he did some exceedingly speedy time, winning the heat in the world's record time of 5 minutes, 35½ seconds.

The third heat saw the Black Death driven by William Wallace, the Spider of Otto Nestman and the new Locomobile of A. L. Riker out for a fight. At the opening Wallace took the pole and the leadership, with Nestman in second place, and Riker had some difficulties with his car. Mr. Wallace took the turn close and gave a fine exhibition of speed work, while Nestman clung to him for about half the distance, being less than a quarter of a mile away when Wallace finished a lap ahead of Riker.

The three qualifiers came out for the final heat. Ross had the pole and was away in grand order, while Wallace followed close after, and then came Rogers. Row gained 150 yards on Wallace, who pluckily drove his car through the clouds of dust, and to the second mile commenced to close quarters with the torpedo-shaped vehicle. He soon came up all but even with Ross, who seemed to lose distance to him on the turns, as Ross coasted the same while Wallace took them at speed, while the steamer gained on the turns. On the third mile, Wallace by daring work, came up alongside and on the inside of the pole, the two turning into the stretch together.

Neither man would yield to the other, until Wallace jumped by the steamer. No sooner had he gone by when the Ross car was seen to swerve considerably, and then to drop and travel along for about 100 yards dragging on the ground. The rear axle had been fairly turned in two by the swerving, and the rear wheel traveled of its own volition toward the inside of the track. Wallace went right about his own business and won the race, with Rogers second.

Just previous to this race came the 5-mile steamer race and had as entries Frank Durban and Louis S. Ross. At the start Durban took the pole and Ross was seen to fall back, as if trying to bottle up sufficient steam to carry him by his rival. It seems that he had 100 pounds steam pressure and that when he opened up the throttle he got the full benefit of the steam on his side and arm. He was out of the race and Durban won as he pleased. Notwithstanding this, however, he got the



THE BORTON HERALD CUP

machine in order and competed in the club championship race with dire results to the car.

The final heat of the touring car event, the trials having been ridden on Memorial day, brought out A. E. Morrison, and his 24-horsepower Peerless, and E. B. Hollander and his 24-horsepower Fiat, both cars being in touring condition, and representing American and foreign manufacturers, respectively. It was noticed that both kept open the door of their tonneaus, so as to reduce the wind resistance. There was no advantage at the start, both cars going over the line together, and turning into the back like one. Here Mr. Morrison opened up and ran away from Mr. Hollander. The Peerless car was working to perfection, and handled by her clever driver she showed speed in plenty and time most creditable considering she was in full touring condition. The Fiat did not seem to be able to hold the American vehicle.

The last race on the programme was the 10-mile pursuit race, originally scheduled between Bowden and Hills, but which owing to the accident to the Hills machine earlier in the week was changed to be ridden between Bowden and Wallace.

Wallace won the honor of starting from the tape and Bowden captured the half-mile mark. The machine got a standing start and both got away well together, Wallace, if anything getting the best speed at the start.

Both machines, however, were remarkably quick in getting under way and the first mile was cut in 1:10 by Bowden and in 1:11 by Wallace. This advantage Bowden retained right up to the second mile, when he was almost three seconds ahead of Wallace.

Taco, however, Black Death seemed to get her second wind. She took the turn at dangerous speed and at the 4-mile mark only a fifth of a second separated the two men, and that fifth was in favor of the white flyer. On the next mile Wallace, by careful handling, getting every ounce of power out of her, and holding the turns in grand good style, perceptibly regained this lost fraction of a second and added some more thereto, which gave him a lead of about 40 yards. At 6 miles Wallace seemed to have fully 100 yards to the good, and at the seventh he had added more to the gain, he taking the turns much faster than his opponent. On the eighth mile, when he seemed to have the race well in, and while rounding from the back stretch. Mr. Wallace's car skipped in grand style, turning completely around and coming within 5 inches of striking the fence.

The referee then declared the race was off, so this was the second time that afternoon that fate served Wallace an ill turn, as the referee very properly ruled him out of the Herald trophy contest, as his tires were in a dangerous condition and were changed before he was permitted to start in this contest. It is interesting to know that Wallace's time for the 7 miles was 7 minutes, 24.5 seconds, and Mr. Bowden's 7 minutes, 27 seconds, which shows how closely matched were the machines.



THE CROWDED INFIELD AT HOTTEN MEET



## FROM BUFFALO TO CLEVELAND



ALONG THE SHORE OF LAKE ERIE BETWEEN BUFFALO AND CLEVELAND

**F**ROM the earliest days of cycling down to the present I have listened to stories of the beautiful roads between Buffalo and Cleveland—a road, according to reports, that was as smooth as a parlor floor, as hard as asphalt pavement and as wide as a city boulevard. So firmly was I impressed with the idea of finding some such fairy roadway and so great was my disappointment in encountering the wretched road that now lies between these two great middle western cities, that I have about given up the idea of finding good roads in this country, outside of one or two small counties in New York state, which have taken advantage of the Higbee-Armstrong good road law and built state-aid roads across their respective counties.

The automobilists and newspapers in Cleveland and the smaller towns passed through en route excuse this state of affairs and say that it is all due to the recent heavy rains. This may be so, but we have had rain almost every day since leaving New York city, including our entire trip across the Catskill mountains, and at their worst the mountain roads are much better traveling than this celebrated Buffalo-Cleveland pike.

Leaving Buffalo we passed the new Lackawanna steel plant and on through Wanakah, Idlewood, Evans Center, Farnham and Irving, the mud holes frequently up to the hubs. No, we didn't get stuck, but it was only because two of us jumped out and the third slammed the machine at each mud hole with the throttle wide open and the spark advanced that the car was able to struggle through them. So great was the strain and so severe the jarring that the inch straps holding our typewriter to the seat snapped and our baggage in the tonneau was mixed in a promiscuous heap upon the floor. We were informed by farmers that several cars had been stuck in these holes earlier in the day.

The roads continued rough and the mud holes frequent until we reached Fredonia, 44 miles from Buffalo, the place selected for the noon-day stop on the tour Monday, August 1. Here, as all along the route, the inhabitants crowded around us and asked questions about the coming event, having read all newspaper accounts touching on this subject with interest. It

promises to be a banner day for Fredonia when the several hundred motorists bound from Boston, New York and intermediate points run into that town for luncheon, en route to St. Louis.

In filling our gasoline tank just west of Fredonia we were joined by a farmer and his wife, residing in a near-by house, both of whom were interested in the automobile. Having a few minutes to talk we asked the farmer's wife if she was afraid of automobiles.

"Well, no, I am not afraid of automobiles when the fellows running them are careful, but I was driving along this road last night and I met one of those big red ones. The fellow holding the wheel stopped his machine when I held up my hand, but it kept a hummin' all the time I was passing and just as I got by he shot off four or five torpedoes and nearly frightened my horse to death. Why do you fellows always carry torpedoes with you?"

We tried to explain that the party she passed on the preceding evening had simply opened his muffler, but she would not have it that way and firmly insisted that torpedoes were shot off to scare her horse. After we had given the couple a short ride up the road, during which both clung to the seats with death grips, we proceeded westward, being obliged through lack of time to refuse an invitation to dinner with the farmer and his wife.

A little further on we encountered a peculiar source of trouble and one that the humane society would do well to look into. A horse had been tied by its owner to a fence rail with a 5-foot halter strap and allowed to run out on the road. The animal was grazing peacefully on one side of the road when we came in sight and seemed to pay no attention to our approach until we were within a few feet of him. Then he suddenly took a notion to run, and with the fence rail dragging between his feet and the end prodding his front legs with every jump, the poor brute galloped down the road directly in front of the machine.

The animal stumpled and fell, directly in front of the machine, got up again and continued his mad gallop, went down again and

scrambled up once more to continue his flight. In the meantime we had stopped the machine and one of our party ran ahead to lead the horse one side. He was found to be so badly cut up and bruised that he could hardly walk. In the meantime the owner, filled with rage, appeared on the scene accompanied by several neighbors. Being a lover of horses myself, the sight of the poor brute's sufferings made me fully as angry as was the owner, and not waiting for him to say much I sailed in:

"Such a man as you should not own a horse. Anybody fool enough to tie a horse in that manner and turn him loose on the road should not be allowed his freedom, but should be sent to prison for cruelty to animals. Here is my card and I want to know your name. I'll see what New York justice is and see that you get all that's coming to you," but the irate owner of the horse had fled, leaving his crippled animal after him, and the neighbors who, when coming on the scene, were ready to wreak vengeance against the automobile and its occupants were with us now, and I dare say there will be no more Portland horses allowed to graze in the road tied to fence rails.

A few miles further on we encountered another obstacle that for a few moments looked serious. A hull calf was tied by a long rope to a stake at the road's edge. Instead of running at our approach he made full tilt for the machine with his head lowered and tail in the air. We stopped just in time to avoid a collision, but it took the most careful urging to get that calf out of the road.

From Fredonia to Erie the road was in fair condition, and we made up some of the time lost between Buffalo and Fredonia. Running into a very violent rain storm a few miles west of Erie, we made for Girard, where we put up for the night in one of the best apportioned country hotels we have thus far encountered. Last fall the endurance run ran a mile south of Girard through what is known as Miles Grove, owing to the bad condition of the Girard roads. These conditions have been greatly improved and we found one of the best stretches of roadway on the course running through this village.

At Ripley we ran across an old automobilist, Mr. Randall, who still clings to the steam type of machine, and his Locomobile survey is well

EDITOR'S NOTE—This is the fourth in a series of articles by W. S. Harrison concerning a trip from New York to St. Louis over the world's fair tour route.

known from Buffalo to Erie. Mr. Randall is a grape grower and at his invitation we visited his wine cellar, where the famous Randall grape juice is stored.

From Erie to Cleveland the road was sandy, despite the heavy rains of the night previous. We made fair progress along this road until just before entering Cleveland, or rather until we struck Euclid. Here the Euclid avenue pavement is being extended and the roadway is torn up. Not only is the roadway torn up but there is absolutely no other way of entering the city than to slam a car across some of this section, the roads on both right and left being well nigh impassable. One hole in particular, just across the Euclid bridge, was over 3 feet deep and extended entirely across the highway, the bottom being filled with soft clay. We barely cleared the hole, but we were through, and slowly picked our way between the worst places until we finally, after turning many corners, once more ran into Euclid avenue, a half block below the end of the torn-up place, and found good pavement to the Hollenden.

#### FOUND ROADS EXCRUCIABLE

Syracuse, N. Y., June 11—"The worst roads we have encountered since we left St. Louis we came over today, in the little town of Waterloo, and coming through the Montezuma marshes," said H. W. Taplin, of Trenton, N. J., a member of the Trenton Automobile Club, who arrived here Monday night with H. B. Taplin of New York in a touring car on a journey from St. Louis to Philadelphia, Pa. "Twice we had to build bridges, and on more than one mile we ran through mud and water 6 inches deep," declared the speaker. They left St. Louis 2 weeks ago Monday and on their trip passed through Vandalia, Ill.; Terre Haute, Ind.; Indianapolis and Richmond, Ind.; Toledo and Cleveland, O.; Erie, Pa.; Buffalo, Rochester and Syracuse, N. Y. They made between 150 and 200 miles a day, excepting Monday, when they travelled only 75.

#### MOUNTAIN CLIMB ARRANGED

New York, June 13—"Senator" Morgan, who is managing the great Mount Washington hill climbing tournament and tour for Anderson & Price, proprietors of the Ormond hotel and the Inn in Florida, and the Mount Washington and Mount Pleasant hotels at Britton Woods, N. H., announces the dates of the function as July 11-16.

The climb will be up an 8-mile stretch of fine macadam road to the top, whose elevation is 6,200 feet. The cars will be segregated into at least two classes, so that no car will be compelled to go out of its class in the contest.

In connection with the tournament there will be a 2-days' tour of the White mountain region covering the notable points.

#### NAPIERS AS HILL-CLIMBERS

The Nottingham Automobile Club, of Great Britain, organized a hill-climbing contest on the Ab Kettleby hill, 14 miles from Nottingham. The distance was 1 mile, with grades reaching 11 per cent at places. S. P. Edges in an 80-horsepower Napier racer made the fastest time, going up the hill in a first trial in 1:36 and in 1:35 in a subsequent trial. Mark Mayhew, also in an 80-horsepower racer of the same make, covered the mile in 1:37 4-5 and 1:40 1-5, respectively. Clifford Earp in a 35-horsepower Napier did a very good performance by travelling a mile in 1:40 1-5 the first time and 1:41 the second time.

## RACE RULES PRAISED

### Conditions Governing the Vanderbilt Cup Race Generally Pleasing—To Help Home Production

New York, June 13—Mature consideration of the announced conditions for the Vanderbilt cup race adds to the commendation the donor of the cup and the framers of the rules are being given very generally. Mr. Vanderbilt has shown a sincere desire to establish an American cup, in the contests for which Americans should have the main say and American makers and drivers a contest at home that should teach them all they should know about the long distance game before they may be asked to go abroad and battle for this and the Bennett trophy.

The criticism that the conditions shut out American owners of crack foreign cars is answered by the suggestion that there is nothing to prevent these owners of imported flyers from asking through their makers and the national committees that they be put on the foreign team, to which their make of car belongs. With teams of ten the foreign clubs and makers would no doubt be glad to have their teams made up in part of Americans driving their cars. No better advertisement in demonstration of them could be had.

Prominent in this class of possible numbers of foreign teams are: H. L. Bowden, Mercedes; H. R. Hills, Georges Richard-Brazier; Alfred Vanderbilt, Mercedes; S. B. Stevens, Mercedes; B. M. Shanley, Mercedes; W. Gould Brakew, Renault and Fiat; William Wallace, Renault; F. A. La Roche, Darracq; Harry Harkness, Mercedes; and Foxhall Keene.

"Throughout the preliminaries leading up to the final decision as to the conditions of

posed this, saying that our beating one another would prove nothing and advance us but little. Under the conditions adopted our makers and drivers at small expense can for 2 years, at least, learn the lessons that will in the end give them victory.

"The criticism that Americans owning crack European racing cars will be barred from the race is easily answered. It must always be remembered that Mr. Vanderbilt had in mind primarily the good of the American end of the game. There is, however, nothing to prevent such owners from applying to the makers of their cars and thus ultimately to the national club representing them to be placed on their teams. With the demonstration of the car as a national product the chief factor in the race, foreign makers and clubs might easily deem it to their advantage to have their cars driven by Americans. If the expense of sending an entire national team of ten is desired to be avoided the Americans might be made a part of it."

#### THE SQUIRE YIELDED

Cleveland, O., June 11—After firing a number of Clevelanders for scoring, Justice Disette of the neighboring village of Glenville has reversed himself and has declared that the speed ordinances of Glenville, East Cleveland and other towns are illegal. The country justice has been fining automobilists right and left of late, but the other day he hauled up a man who knew something about law and before he got through with him the country justice learned a few things. The ordinances in the neighboring towns provide for an maximum speed of 12 miles an hour, while a state law passed by the recent legislature provides that the maximum speed outside the business districts of cities shall be 15 miles an hour. The last man hauled up before Justice Disette argued that the state law should take precedence over the village ordinance and the "squire" finally held this to be correct and discharged the man.

#### ARRESTS SUDDENLY CEASE

Orange, N. J., June 12—"The action of John A. Hill in bringing suit against the marshal and justice of Chatham for false arrest and illegal fining, whose circumstances were fully set forth in last week's Motor Age, has thrown such a scare into the over zealous Jersey minions of the law, who have been persecuting automobilists "on general principles," that the arresting of them has suddenly stopped. While on Sunday, May 29, there were forty-four arrests made and \$687 collected in fines, last Sunday not an arrest was recorded. Another unjustly arrested automobilist followed Mr. Hill's example and this added to the scare in Jersey's petty judicial and administrative circles until now the belief is strong among them that motor cars filled with lawyers and would be litigants looking for trouble make up the majority of tourists on Morris county roads.

#### COAST TO COAST

A few days ago G. E. Seates, an automobilist of Waterville, Me., in company with Mrs. Seates, left San Francisco in his Stevens-Duryen for a journey across the continent, the destination being Portland, Me. Mr. Seates had been here about 2 weeks when he purchased the car and after thoroughly acquainting himself with it prepared to make the journey to the Atlantic coast.



MR. AND MRS. G. E. SEATES

the race," said Chairman Pardington, of the racing board, to a Motor Age man. "Mr. Vanderbilt has emphasized the point that his wish was that first and foremost the conditions of the race should have as their object the improvement of American cars and the development of American drivers as champions.

"We think that by keeping the race in this country for 2 years and throwing it open to the best cars and drivers that the world can produce, we will give our makers and owners the best chance to learn the lessons they must learn before we can hope to be among the leaders at this game. The closing of entries for 2 years to Americans was suggested. Mr. Vanderbilt op-



## BROKE CLIMBING RECORD

### Last Year's Figures at Minneapolis Dropped by All Sizes of Cars—Big Field Entered

Minneapolis, Minn., June 11—Hill-climbing records for this part of the country were smashed in great shape this afternoon in the annual climbing contest of the Minneapolis Automobile Club, held on Kenwood hill. The Pope-Toledos had the day, although the Peerless and Packard also came under the mark set by 24-horsepower machines last year.

Harry E. Pence had the credit of setting new marks in the special class and in the first class, which drove the enthusiasts wild with joy. In the special class, Mr. Pence drove Alf Pillsbury's stripped Pope-Toledo up the grade 2,816 feet with a minimum grade of 11 per cent in the hair-raising time of 51.4-5.5 seconds; and in class 1 he carried J. H. Quel's 24-horsepower Pope-Toledo with full road equipment over the grade in 59 seconds flat. In the contest last year the Pope-Toledo came in as a special feature, and covered the course in 1:15. This year four of the same make, with a Peerless and a Packard, made better time.

The contests today were preceded by a week of hard practice on the part of the drivers, and in nearly every class pulled off this afternoon the actual time was lower than that which had been claimed during the week. The marks set in the various classes, however, are eminently satisfactory.

The Wintons were also in prominence. A. C. Bennett's car covering the grade in 1:11, the same time made by Ralph Bagley's Packard. The Wintons traveled in the second class, in which they took first and second places, the Knox taking third place.

Of the smaller machines, the Rambler was easily king, and, to the surprise of everyone, the Rambler which won in this class made better time than any of the second class machines, and beat the Peerless, Packard and Stearns in the first class. The Rambler covered the hill in 1:07.3-5, which was but 2 seconds slower than the time made by Dick Ferris' Pope-Toledo.

Carleton Pillsbury's Franklin followed the Rambler in class 2, making the excellent time of 1:10.1-5. In the fourth class the Ford finished at the top, in 1:24.2-5, second, third and fourth places going to Cadillacs.

The competition was fiercest in the first class, to judge from the eagerness displayed by every one. The big cars tore up the grade amid a storm of cheers from the crowds which covered the sides of the hill, and when the time made by the Quel machine, Pence driving, was announced, the enthusiasm was unrestrained.

Great interest centered in the open class, although it was evident that this had been created simply to give the big stripped Pope-Toledo a chance. Herbert Lytle, the driver from the Pope factory, took charge of the preparation of the car, and it was expected he would drive it. The regulations forbade this, however, and Mr. Pence piloted the car as it tore over the grade.

The arrangement for timing the machines was essentially good, as was the management of the event throughout. The hill has a number of turns so that start and finish are not visible from the same point. A telephone system was rigged up from the starting line to the finishing post, and the starting time was tele-

phoned ahead to the finish line, where the actual time was caught. The results were as follows:

Class 1—Machines Valued Over \$2,750.	
J. H. Quel.....Pope-Toledo .....	1:59
A. F. Timmer.....Pope-Toledo .....	1:55
D. C. Ferris.....Pope-Toledo .....	1:55 4-5
T. F. Heffelfinger.....Peerless .....	1:58 1-5
Ralph Bagley.....Packard .....	1:11
Bert Strong.....Stearns .....	1:22
Class 2—Machines Between \$2,750 and \$1,750.	
A. C. Bennett.....Winton .....	1:11
G. W. Capelin.....Winton .....	1:12
George Sherrill.....Knox .....	1:41
Class 3—Machines Between \$1,750 and \$1,000.	
M. E. Clark.....Rambler .....	1:07 3-5
C. C. Pillsbury.....Franklin .....	1:10 1-5
Dr. A. P. Walrath.....Rambler .....	1:14
J. J. Barclay.....Premier .....	1:24
H. H. Moulton, Jr.....Franklin .....	1:25 3-5
E. L. Fawkes.....Rambler .....	1:26
H. E. Wood.....Rambler .....	1:45
Class 4—Machines between \$1,000 and \$750.	
Walter Bens.....Ford .....	1:24 2-5
Dr. A. A. Law.....Cadillac .....	1:30
H. E. Pence.....Cadillac .....	1:31 1-5
H. H. Newell.....Cadillac .....	1:32
George West.....Ford .....	1:33
Lewis Long.....Olds .....	1:29 1-2
Class 5—Machines at \$750 and Under.	
L. E. Roberts.....Rambler .....	1:27 1-5
Class No. 6—Free for All.	
Alf Pillsbury.....Toledo .....	1:51 4-5

## SPORT SLOW IN HARTFORD

Hartford, Conn., June 11—William Pickens, owner of "999," and Jed Newkirk, driver, are still in town, having run an exhibition under electric light at Hampden park last evening. The half-mile track was used, the mile track being rank with grass and weeds and unused for several years, since the Massachusetts law against pool selling became effective. The track is lighted with thirty-eight arcs, and the exhibition by 999 was devoted to the weekly program of running races provided by a half-dozen selling plants who are speedy for a half-mile. The old 999 did a slow mile as the track is in poor shape, the turns being very sharp.

Louis Elmer, promoter of cycling races, whose troubles with the velodrome, a board track, are now being aired in the superior court, is ambitious to hold a race meeting at Charter Oak on July 4. The recent meeting was so much of a fiasco, due to the failure of manufacturers to start without being guaranteed a win, that the owners of the tracks are not likely to allow the experiment of motor car racing to be continued. Messrs. Welch and Jones, owners of Charter Oak, feel satisfied that while the first meeting was successful further ones are not likely to be largely attended. The prospects of more racing in Hartford this season are not good.

While in Hartford Pickens arranged to exhibit 999 at Toronto and Montreal, at the latter place on Dominion day. From Montreal 999 will be taken to Cincinnati where a meeting is to be held at Oakley park, also owned by Messrs. Welch and Jones, on July 4.

Pickens is confident that the old Ford racer is still a world-better and has equal confidence in Newkirk's ability to drive it to win. He expects to enter it in several big races this summer, aside from driving it at minor meets.

## WIND-UP AT ARRAS

The last 2 days of the meeting of Arras, France, were fully as interesting and successful as the first 3 days. The events were a tourist run, a kilometer flying start, and a kilometer standing start. Forty cars took part in the run. Deville in a 20-horsepower Gardner-Serpollet made the fastest time in the kilometer events and was awarded first prize.

## FIRST HOOSIER MEETING

### Indianapolis Opens the Season with Races which Draw Fair Crowd—Sport Only Ordinary

Indianapolis, Ind., June 13—Saturday afternoon at the state fair grounds 2,500 to 3,000 enthusiasts inaugurated the Hoosier automobile track racing season at a meet which brought out one new star, the Premier Comet, a light weighter, and which was a compromise between long waits and fairly good racing.

The track was good but dusty and the two professional racers, Earl Kiser and Carl Fisher on twin Mohawks, were unable to approach record time. Still they gave three more or less thrilling matches which would have been excellent racing spectacles but for the delays in starting the big cars.

Delay, in fact, marked the whole program. There was no band and the grand stand was forced to chew gum for entertainment during the intervals. The crowd seemed satisfied, however, for the sport was brisk after the batting had been started and the bleachers forgave the long waits between innings.

The touring car honors were divided between a Toledo and a White, with Apperson ears for next closest competition. There was considerable speculation concerning the quality of the new eight-cylinder, air-cooled Premier Comet which was pitted against the Olds Pirate. Its winning of course pleased the Hoosiers, and its time of 5:43 for 5 miles gave promise of speedy work when it shall have been tuned up to track work.

The fields were small in all the races, several of the entrants being troubled with cold feet. As a whole the meet was a fair entertainment of automobile sport, but not a howling success.

The first race was a 5-mile race for touring cars, each carrying four or more passengers and it proved an easy win for a Pope-Toledo driven by A. C. Webb, of Toledo. Nelson McLain, of Chicago, with an Apperson was second and Webb Jay, of Cleveland, with a White steamer, third. Earl Fisher, Apperson, was the other starter. The time was 7:23 4-5.

The second event, first heat of a 5-mile best two in three free-for-all became a match between the two Mohawk racers driven respectively by Earl Kiser and Carl Fisher. After much fumbling the cars got away slowly. Kiser soon took the lead and kept it, winning in 5:18.

In the 5-mile invitation race for stripped touring cars Webb Jay, White steamer, got back at the Toledo and Apperson racers, winning handily in 5:48 4-5, a great cut in the time of the first race. Webb, with the Toledo was second, and Elmer Apperson, who this time piloted the Apperson car, was third. Earl Fisher, Apperson, trailed as before, having for company this time Charles B. Somers, Winton.

Carl Fisher reversed the tables in the second heat of the 5-mile, free-for-all, Mohawk match race and defeated Kiser by a safe margin in 5:30 3-5.

The Apperson, driven by Elmer Apperson, got its reward for persistency in the 5-mile handicap, winning from Webb, Toledo, second, and Webb Jay, White, third, the last being scratch. The tourists were Earl Fisher,

Apperson, C. B. Sommers, Winton and Harry Stutz, Cadillac.

Then came the well known Oldsmobile Pirate of Detroit, and the brand new never tried Premier Comet, of eight air-cooled cylinders, four wheels and a driver. The 5-mile match was an easy clean-up for the new aspirant for light weight honors. It was driven by George Wroigley, who negotiated the five ovals in 5:43. Frank Moore of Detroit drove the Pirate.

The Kiser-Fisher 5-mile match was decided in a third 1-mile heat run in 1:01 2-5, and easily won by Fisher.

#### TOUR ROUTES CHANGED

New York, June 11.—Interest in the St. Louis tour July 25 to August 10 is shown by the constant receipt, at the tourist committee's headquarters, of letters of inquiry and requests for entry blanks. These letters come from all sections of the country, and are evidence of the fact that many expect to make the tour who have not hitherto participated in any long runs. Many requests for entry blanks come from small cities and towns where there are no automobile clubs. A great number who have written stating that they will make the tour have not yet made formal entry.

A number of changes in the routes as given in the official booklet have been decided on by the committee as follows:

1.—An optional route is given from Cleveland to Clyde, O., by way of Sandusky along the shore of Lake Erie. Under certain weather conditions, this may be preferable to the route as planned—through Elyria, Oberlin and Norwalk.

2.—An optional route from Chicago to Joliet, by way of the west bank of the Desplaines River. This gives a choice of routes on either side of the river.

3.—A detour will be necessary at Effingham, Ill., on the national highway. At that point the route will follow a road about 2 miles north of the highway to a point a few miles east of Vandalia.

4.—A detour in Indiana, from Indianapolis, passing south of Greencastle to Rockville, and thence to Terre Haute will give a route which, while 20 miles longer than the highway, is in some respects preferable.

5.—By turning south at Springfield, O., an interesting route through Dayton and Eaton can be secured. The distance is about 10 miles further than by the national highway.

The route from Philadelphia has been changed to run through Reading and Harrisburg, instead of by way of York and Lancaster.

#### CONSOLIDATION EFFECTED

The Black Diamond Automobile Co., a New York state corporation with \$500,000 capital, has made arrangements to consolidate with the Buckmobile Co., of Utica, N. Y. It will continue to make practically the same machines as are now being made by the Buckmobile Co. Dr. A. G. Brower and son, A. V. Brower, will hold the same official positions with the company that they have filled with the Buckmobile Co. They will be largely interested in the company. William Dieter, the Black Diamond Automobile Co.'s mechanical engineer, now has full charge of the Buckmobile Co.'s works, which have been enlarged. The Black Diamond company has also purchased the Remington plant, which is situated in Utica. This is a large, well equipped plant and will be operated to its full capacity.

## TAX MEN AFTER OWNERS

### Automobilists of Cleveland To Be Treated to a Little Surprise by Board of Assessors

Cleveland, O., June 13.—Participants in the big parade and in the field day exercises at Glenville commented upon the fact that an unusually large number of supposed newspaper men seemed to be securing data about the cars in line, while to all appearances every one who had a camera was out taking snap shots of the cars as they passed by. Whenever there was a stop in the parade hustling young reporters would make inquiries as to numbers and makes of cars, owners, etc. At the track, after the cars had lined up along the fence, it was noticed that the photographers seemed just as anxious to secure views of the ordinary every day machines as they were of photographing the racing cars and those that participated in the floral and children's parades. With visions of seeing their names and photographs in the papers more than one proud owner of a fine machine volunteered information about his car and smilingly assented when the hustling amateur legged permission to photograph the party in the car.

The reason for this intense interest displayed by the public will be made plainer when some of the owners of big expensive touring cars come to pay their taxes. Some time ago the board of review at the tax office secured a list of the names and numbers of automobile owners from the city license clerk and this list was compared with the personal property duplicates. Strange to relate it was discovered that the number of automobile tags issued by the city clerk was several times larger than the number of automobiles owned in the city as evidenced by the tax duplicate. Wherever it was found that a person had "forgotten" to list his machine it was added by the board and the penalty attached. But automobilists are a class smarter than the ordinary and it was not many days before a large proportion of the people who had been charged up with automobiles that they did not remember, were around prepared to swear that their cars were worn out old skates that would not bring \$100. In short, it became evident to the board that very few high class cars were owned in the city. But the board was not quite willing to let it go at that and when the automobile field day exercises were talked of, some of the members of the board were seized with a brilliant idea.

The chief clerk of the board was instructed to take all his deputies to the automobile show and take the number of every car in sight, describe the machine and place the probable value. A lot of amateur photographers were pressed into service and instructed to take as many pictures of automobiles as possible. Apparently the men enjoyed themselves and took in everything they saw. Report has it that the board has photographs of over 200 automobiles, all of them giving a clear view of the machine and showing the number, while the "reporters" are said to have descriptions of more than that number of cars. Thus it will happen that when many of the owners of automobiles come before the reviewers with complaints, they will be shown photographs and descriptions of the car in question and it will take a pretty smooth tax dodger to evade such evidence.

But according to some of the committee

who were in charge of the field day exercises, the tax collectors were not as smart as they thought they were, because it is claimed that many of the cars that participated were borrowed from manufacturers for the event and bore numbers taken from old cars. In the floral parade it is said that more than fifteen of the cars were furnished by manufacturers and did not belong to the parties who drove them, and in some cases they were fitted with numbers owned by other parties. Of course, if the data is mixed up it will be valueless from the judging point of view.

#### PARKER IS OUT

Hartford, Conn., June 11.—New officers were elected at a meeting of stockholders and directors of the Hartford Rubber Works Co. Tuesday. President Lewis D. Parker, who was at the same time general manager, left the company and Charles H. Dale of New York, formerly president of the Peerless Rubber Co., of New York, was named in his place. The first vice-president is now William Seward, Jr., of Hartford. Charles A. Hunter of New York was elected second vice-president; James W. Tilson, of Hartford, secretary and treasurer, and Henry Plow, also of Hartford, assistant secretary and treasurer.

Lewis D. Parker had been an officer of the Hartford Rubber Works Co. for about 13 years, having joined the concern in 1891, when Colucci A. A. Pope acquired the late John W. Gray's interest in the company. He was made treasurer and since advanced until he reached the highest office obtainable. The new president has been connected with the rubber trade for many years and the Peerless Rubber Co., of which he was president, has been successful in this line.

It is reported that when President Parker started in the management there were less than fifty people employed by the company while there are now from 400 to 650. The business transacted has recently amounted to from \$1,500,000 to \$2,000,000 a year. There is said to be a surplus of \$500,000.

#### RECENT INCORPORATIONS

Hagerstown, Md.—The Crawford Automobile Co., of Washington county; capital, \$35,000. Incorporators, Robert S. Crawford, Samuel B. Loose, M. P. Moller, Henry Holzapfel, Jr., and Oscar J. Beard.

Detroit, Mich.—The Automobile Timing Machine Co.; capital \$1,000. One of the incorporators is Paul de Ronne.

New York City—The Mutual Motor Car Co.; capital \$100,000. Directors, H. R. Wintthrop, Arthur Iselin and F. C. Havermayr.

Washington, D. C.—The Industrial Motor Co.; capital \$1,000,000. Directors, L. G. Liebschutz, A. E. Glascock and E. L. Mattice.

New York City—Empire Auto Car Co.; capital \$5,000. Directors, J. D. Wallace, Henry Heideberger and Florence L. Heideberger.

#### SEVERE EXAMINATION

The Association Generale Automobile of France issues diplomas of efficiency to candidates, who must be over 18 years old and who satisfactorily answer an examination covering the following points: Driving, starting, reverse driving, turning, uphill and downhill driving, stopping, knowledge of the construction of the motor, transmission, ignition, tire troubles, police and traffic regulations, good bearing, morality, sight.

# AUSTRALIA HOLDS RACES



THE TRACK AND GRAND STAND AT MELBOURNE

Melbourne, Australia, May 4.—Motoring is now in a similar stage as was bicycling after it had been introduced only a year in this part of Australia. This means that there is a craze for motor cars, that everybody seems to be

starters in the voiturettes handicap, which was for cars developing less than 6½ horsepower. The distance was 3¼ miles. J. R. Crooke, driving a 4¼-horsepower Locomobile and having a handicap of nearly two-thirds of a mile,

it a gold mine, because the demand for automobiles is immense.

Before the races started a parade, in which about forty cars participated, was held. Twenty-four of these motor cars were of French origin, ten came from England, and five each from America and Germany. Almost all the motor cycles which took part in the races were brought over from England.

There were twelve

event followed in the shape of a backward contest over a course of ¼ mile. Thomas Rand was the winner on his Decanville, closely followed by Captain P. Chirside's Panhard. The time was :48 3-5. In a contest for stopping in the shortest distance while going at a rate of 15 miles an hour, P. Scott in his little 5-horsepower Humbrette was the winner, stopping the car within 38 feet.

There were nine starters in a competition in which the six cars which passed the red flag first were to continue until a white flag was reached and were to stop with the front wheels within a line drawn near the flag. Captain Percy Chirside was the winner, followed by J. Wallace in a Benz.

In both motor cycle handicaps there were more than a dozen starters and the little machines made a fine showing on the big track. A scratch man won both events, S. Bolger being the winner in the first and A. E. Sutton in the second. The meeting was so successful that another on a larger scale will be held within a month.

The meeting has already had a remarkable effect upon the automobile, for since the races several machines have been sold and the num-



THE CROWD ON THE LAWN WAS LARGE AND ENGLISH

greatly interested in the more modern method of locomotion, and that those who are fortunate enough to be able to and do pay the price for an imported vehicle are paying premiums in order to get cars.

No better evidence of the growing interest the public is showing in connection with automobile matters could hardly have been found than at the automobile and motor cycle race meeting held 2 days ago at the Maribyrnong race track. There were more than 5,500 spectators, an enormous crowd considering that there were no racing machines or any freakish looking things to be seen, but just ordinary business and pleasure cars.

The enthusiasm of the people was intense and the general conversation was of automobiles and motor cycles. There was one thing to be regretted and that was the fact that almost all the cars at the meeting were foreign. There are a few Australian automobile builders, but they make machines when especially ordered and mostly from assembled parts, which are imported. There can be no doubt that a factory which could turn out a reliable car would find

won from S. Day on a 5-horsepower Humbrette, which had less than ¼ mile handicap. The time was 8:28¼.

Only three starters were on hand when the heavy car handicap was called. Captain Percy

Chirside on a 7½-horsepower Panhard with 1,250 yards handicap won, covering the 5½ miles in 10:13¾. E. Miller on a 12-horsepower Benz car was second. Thomas Rand on a 16-horsepower Decanville and starting from scratch, won the next event, which was an open handicap for cars of any horsepower. E. Miller's Benz was second. The time of the race was 5:38¾ for 3½ miles.

A very interesting

ber of inquiries for cars has been increased. The trouble is there are few cars to be had now, and as the winter season is approaching many will wait until spring before making their purchases.



A SECTION OF THE CROWDED GRAND STAND

# AFFAIRS OF THE CLUBS

**Michiganders Hospitable**—The Muskegon Automobile Club, of Muskegon, Mich., will entertain the Grand Rapids Automobile Club, of Grand Rapids, Mich., July 1.

**Start at Chicago**—Members of the Grand Rapids Automobile Club, of Grand Rapids, Mich., who will take part in the St. Louis run in August, will cross Lake Michigan by boat and join the Chicago caravan.

**Plans Long Runs**—The annual run and race meet of the Automobile Club of California to Del Monte, will take place during the latter part of July or early in August. The club has also planned a number of runs to Santa Cruz, Byron Springs and other localities.

**Postponed Run Held**—Rain spoiled the plans of the Automobile Club of Syracuse, N. Y., for an outing to South Bay and the run was postponed until Tuesday of this week. This was the first run of the season and a large percentage of the membership took part.

**Newark to Parade**—An automobile parade will be held in Newark, N. J., June 25 under the auspices of the New Jersey Automobile and Motor Club. It is expected that 100 cars and motor cycles will be in the run and the city officials will be invited as guests of the club.

**Wants Speedway**—The Worcester Automobile Club, of Worcester, Mass., held a meeting June 6 at which a committee of three members was named to confer with the city authorities in view of obtaining permission to use the straight stretch of road along the lake near the city. Two other committees were named, one to look after laws and ordinances, the other after tours and races. A letter from Secretary Gillette, of the Automobile Association of America, concerning the St. Louis tour and an invitation from Hyron B. Bugbee, of Putnam, Conn., to attend the Windham county fair August 31 and September 1, were referred to the committee on tours.

**Buffalo Club's New Home Open**—The new quarters of the Automobile Club of Buffalo were inaugurated last Saturday night in the presence of more than 400 members, besides a large number of delegations from Toronto, Montreal, Ottawa and other Canadian towns. The opening address was made by President Hotchkiss, who gave a brief history of the club which was reorganized a little over a year ago, and had then 113 members. Today its membership of 479. He suggested a club house be built some 25 or 30 miles out of town.

**Senator Henry W. Hill** made a short address, pointing out the importance of the automobile industry to Buffalo and the entire country. "There will be a time," said Mr. Hill, "when there will be factories turning out more automobiles than horse carriages and street cars." S. J. Doellittle, president of the Toronto Automobile Club, said he was pleased to be among his American brethren but complained about the abominable roads through which the Canadian motorist had to travel. An official announced that there would be a club run to Rochester on Saturday of this week. The route will be by way of Batavia, Mulford, Le Roy, Caledonia, and Scottsville into Rochester.

**Californians Active**—The Automobile Club of California is planning a lively season. The improvement of the roads is the main object, but there will also be sport during the summer months. The endurance run to Los Angeles in conjunction with the Automobile Club of Southern California is the first big event planned. Then will follow the annual run to Del Monte and the 1 day's racing there. By that time plans will have materialized for the tour of the club to demonstrate the practicability of the motor vehicle. In August, during the second week, the annual automobile meeting is to be held at the Ingleside race track and several eastern crack riders who have never been as far as Frisco will probably take part in the races. It is planned to consume 9 days in the endurance run, including the return trip. The speed limit will be set at 15 miles an hour and racing will be prohibited. An observer will be on board of each car. The run will be for touring cars carrying four people each. There will be an open prize, for which all cars will compete, and there will be additional prizes for four, three, two and one-cylinder machines. Special prizes will be awarded with regard to the consumption of gasoline.

**A New Question**—At a meeting of Winnipeg Automobile Club, of Winnipeg, Manitoba, held last week, a long discussion took place concerning the question of changing the day of the week when to hold the regular club run. Heretofore this took place on Saturday, but so few members participated that it was thought best to change the day. The club also decided to take up the case of C. F. Grundy, one of its members who is being prosecuted by the police for having left his machine standing in the street in front of his residence. It so happened that a horse attached to a milk car shied at the sight of the motor car and ran on the boulevard. A policeman prosecuted the driver of the milk cart for the offense. The police took action against Mr. Grundy. The outcome of the affair is watched with much interest by Winnipeg motorists.

**Meet at Kansas City**—The automobile clubs of Omaha, Neb., and Denver, Colo., intend to start for the St. Louis run in time to join the delegation from the Kansas City Automobile Club, of Kansas City, Kans. The latter organization intends to start August 7 and reach St. Louis, Mo., in 3 days.

**Will Give Orphans Ride**—Recently the Fort Wayne Automobile Club, of Fort Wayne, Ind., sent an invitation to 150 inmates of the Allen county orphans' home, for a cross-country run to be held June 18.

**State Federation**—There is talk among some of the Illinois club men of organizing a state association of clubs, there being about fifteen clubs through the state, with a total membership of about 2,000.

**Chicago "400"**—At the meeting of the board of directors of the Chicago Automobile Club, held June 9, seventeen new members were elected to membership. This makes a total of nearly a hundred within one month. It will be the Chicago "400" pretty soon.

**Oldfild Arrested**—For speeding at the rate of 35 miles an hour a warrant for the arrest of Barney Oldfield was sworn out in Cleveland, O., Monday. When the Bullet driver heard about the matter he telephoned police headquarters that he would immediately appear.

**Hungry and Thirsty**—Only a few members of the Dayton Automobile Club, of Dayton, O., took part in the run to Tippecanoe last week on account of the rainy weather. In the latter town an elaborate dinner was served at 8 o'clock in the evening to the hungry and thirsty motorists. The next run will be to Germantown July 4.

**Chicagoans Will Tour**—There will be a special run of the Chicago Automobile Club Saturday of this week on account of Derby day. The regular monthly dinner will be given June 25 at the Evanston clubhouse, at 4 o'clock. A 4-days' tour, with night stops at Milwaukee, Oconomowoc, Waukesha and Geneva, will begin July 1 at 10:30 o'clock.

**Will Discipline Themselves**—At a recent meeting of the Colorado Springs Automobile Club, of Colorado Springs, Colo., E. W. Genner was elected president; Charles M. MacNeill, vice-president; S. E. Pierce, secretary, and T. E. Curtin, treasurer. B. C. Allen, W. J. Batchelder and W. W. Price were elected to serve with the officers as members of the executive committee. A constitution was adopted at the meeting and the following article concerning discipline of members is interesting: "It is distinctly stated and to be understood that the club desires to be law-abiding and is wholly opposed to illegal, reckless or careless driving, and takes upon itself the prerogative of trying any member or members against whom complaint of illegal, dangerous or reckless driving shall be made, and shall have the power, in the event of an accused being found guilty of such prejudicial conduct, after a fair hearing before the executive committee, to suspend or expel such offender. It is further provided that the executive committee shall, on instructions by the club, warn non-members against committing infractions of automobile laws, or enter into legal action against non-members committing such infractions." The building of a clubhouse about 10 miles from the city is now being planned. It will probably be fitted out with a half dozen sleeping rooms, one large and several small dining rooms, a parlor, billiard room and a bowling alley.

## A NEW ENGLAND TOUR

### Rhode Island Club Will Make Three Days' Trip to Historic New Hampshire Spots and Back

Providence, R. I., June 11.—The Rhode Island Automobile Club, undaunted by the failure of the Automobile Club of America to successfully conduct a long run, has just completed plans, through its runs and tours committee, for a 3-days' tour to Boston and along the north shore as far as Portsmouth, N. H., and return. In order to be sure that the run will be a success the committee has secured promises of two owners who will participate, and it is expected that a larger number will appear when the time comes for the start to be made. Almost all of the details of the itinerary have been completed, but it has been decided that no inflexible schedule will be made, and each succeeding day's run will be planned the night previous. However, the following plan for the tour has been announced: Friday, June 24, start from the Crown Hotel at 10 o'clock for Boston, where lunch will be served at the Hotel Lenox. After lunch on to Magnolia, Mass., where a stop for the night will be made. June 25 will be spent in touring around the sandpaper roads of Cape Ann, lunch to be served at Newburyport. In the afternoon on to Portsmouth, N. H., where a stop will be made for the night. June 26, return to Providence with lunch at Salem, Mass.

No automobile club could have chosen a better route than this for pure enjoyment and picturesque scenery. The road from Providence to Boston is over many of the famous state highways of Massachusetts, with which almost all Providence automobilists are familiar. From Boston to Magnolia the roads are almost as good as park boulevards, and after Lynn is reached the remainder of the trip is over the north shore drive, which for many years has been the scene of some of the most famous coaching trips in the east. The road is built along the edge of the ocean for almost 20 miles, and it winds in and out among vast estates which are kept by many Boston and New York men. Beverly Farms and Pride's Crossing lie in the route selected and at these places live many of the ministers and ambassadors from foreign countries during the summer whose regular home is in Washington. In fact this district has been called the "national capital of the summer season" on account of the large number of officials who spend two or three months there.

From Magnolia the automobilists will go around Cape Ann, probably visiting Gloucester, Pigeon Cove, and other well-known summer resorts and then will go on to Newburyport, a city once the center of the East India trade, and where fortunes were made on one voyage of a privateer, many of which made this port their headquarters during the war of 1812. The road to Portsmouth is over the old Portland and Boston pike, which is in excellent condition in spite of the fact that it has passed the century mark in age many years ago.

### SOUTH AFRICA DEMANDS

Washington, D. C., June 11.—The government has received an interesting report from a British source touching the motor industry in South Africa. It appears that many vehicles exist for mechanically-propelled vehicles

in South Africa, and the future of the automobile is assured. As yet the demand is in its initial stages, but a large number of cars are already in use, and there are many facts and indications which point to a permanent and prosperous trade. This, however, will only be secured by the manufacturer who studies local conditions, and whose types are most adaptable to the particular influences and difficulties they will be called upon to encounter. From a commercial point of view the opening is particularly promising, and a large demand has already been met in connection with agricultural work. In the majority of cases horses imported for the work have proved more or less unsuitable to the South African climate, and the services of such animals generally unsatisfactory. No material improvement is likely to be witnessed in this respect, and a stimulus has thus been afforded to the use by farmers of light automobiles. The results obtained from these have proved even better than expected, and from this source a fillip has been given to the trade. English firms were said to be rushing large shipments of motor cars to South Africa, but of this statement little evidence has been available. The marked development shown in this instance, however, is indicative of the growing demand for the automobile gradually forthcoming, which manufacturers may do much to foster and secure.

To fully detail the type of car most suitable for South African needs is a task too voluminous to be dealt with here, but a few of the more salient features may be noted, culled from actual experience and from expert information. The record feats achieved in respect of speed or distance, though proof of the good qualities of the car under known and familiar conditions, are but little likely to help the manufacturer in accurately gauging the conditions which will generally obtain in South Africa. The reliability of a car will prove its supreme merit, and high speed, finish, or low initial cost will count for but little in the outcome. The tires are likely to prove a source of difficulty and trouble, and the manufacturer who can show that the types he employs are well able to withstand the excessive heat and the disintegrating action of the sand, will hold a powerful argument on behalf of his machine. Efficient and powerful brakes form another necessary feature. In South Africa the enterprising tourist will come across many formidable gradients, and hills of 18 to 20 miles in length have often to be engineered. The rough condition of the roads and physical features of the country render it advisable that the car should carry its engine high above the ground, while abundant accommodation for equipment and stores is also essential.

To the features already mentioned may be added the care which is necessary in constructing springs, axles, wheels and steering gear. Most of the breakdowns occur through weakness here. None of the points mentioned, however, presents anything in the nature of an insurmountable difficulty, but by studying them closely the manufacturer will best be able to construct the type of car most suited to the needs of South Africa. The motor car is no novelty in South Africa. A scattered population and widely separated townships render a necessity what elsewhere is too often a luxury. Extensive distances must far more frequently be covered than in England or America and render the merits of the automobile particularly appreciated.

## HOT AFTER MOTORISTS

### Hartford Police Lay Trap and Catch Men and Women in the Drag-net, Fining All Caught

Hartford, June 11.—With the livermen's association circulating petitions addressed to the police commissioners against the speeding of automobiles; with the action of the police commission in jumping on Chief Ryan, more action has been taken in a few minutes here than in all the 5 years of the sport in Hartford, for this city was one of the first in the country to take up and develop both gasoline and electric automobiles. Measuring off a stretch of road on Farmington avenue, a quarter of a mile long, with no houses on either side, and with no cross streets, the police brought in eight drivers, and served warrants reading: "Mr. X. with force and arms did run a motor vehicle on Farmington avenue, a highway of the city of Hartford, at a rate exceeding 12 miles an hour, to wit, 15 miles an hour."

President Leonard D. Fisk of the Automobile Club of Hartford fell into the trap operated by Mounted Patrolman Brown, Secretary H. W. Kyle, of the Electric Vehicle Co.; William L. Leiger, member of the firm of Brown, Thomson & Co., agents for several cars; Dr. C. O. Purinton, of West Hartford; William R. Penrose, H. H. Burdick, Leon A. Gladding, New Britain, and E. L. Cushman were picked up in order. No attempt was made to arrest, the numbers alone being taken and the owners later being served with warrants.

The case of Mr. Cushman is peculiar, since he was not driving the car, and did not know that it was in use. He houses his car at S. A. Miner's garage. Captain Miner had a lively job to bring a wedding couple away from a bunch of rice throwers. Shlras Morris and Miss Grace Root had just been married and telephoned Captain Miner for an automobile to get away from friends armed with confetti. Captain Miner got a big Knox car out and a tire blew up. A train had to be caught and as the run was but a short one, and with the expressed permission to use the car on occasions Captain Miner put Fred Wright, one of his drivers, into the big Winton and Wright was to bring the couple to the station. When the couple found that they were being pursued by friends in hacks, and that there was prospect of a scene at the railway station, they urged Wright to speed. In this way he violated the law. The unfortunate thing about this incident is that Mr. Cushman was the one served with the warrant. The usual fines of \$10 were meted out.

Mrs. F. C. Looser, who drives a Knox runabout, was held up in the New Britain trap and fined. Mr. Looser is something of a humorist as well as a dealer in wet goods. The evening papers of the day following contained two-line reading notices like this: "Scorcher whiskey, \$24.40 per gal. F. C. Looser."

### ROYAL PEOPLE BUSY

Cleveland, O., June 13.—The Royal Motor Car Co. is much pleased with this season's business. It is contracts for about all the cars it can build, and it has followed the policy of spreading its product throughout a wide territory. It has agents in fifteen large cities in various parts of the country and it has furnished all of these with sample cars and in a number of cases several orders have been filled. At present the company is filling orders at the rate of from eight

to ten a week. Last week a car load of machines went to Denver and this week a car load to New York. At the start of the season the company planned to build only 100 cars, but at present the company has that many completed or well under way and the output for the season will doubtless reach 150. Just at present the company is greatly aided in getting out cars promptly through the fact that it adopted the baked enameled finish for bodies, fenders, etc. All Royal bodies are made of aluminum in either sheet panels or castings, the King of the Belgian type being of the latter description. The sheet metal bodies require no filling or rough stuff and a body can be given a high glossy finish of lasting quality in 6 to 8 days, while the cast body requires 8 to 10 days as compared with 3 or 4 weeks for painting bodies. The Royal people are getting out a surer type of car which will be furnished as optional with this year's product. This type of body is getting to be very popular in this district because of the fact that a car may be mounted from a stepping stone or curb, obviating the necessity of sometimes wading through mud.

#### REPAIRS ALL TIRES

A new Chicago concern is the Rubber Goods Repair Co., located on Sixteenth street just west of Michigan boulevard. Fred Hotchkiss, who is at the head of the enterprise, was with the Diamond Rubber Co. for several years. The new concern is fitted out with all appliances for rebuilding and repairing tires and will make a specialty of the former work.

## GOSSIP OF THE GARAGES

**Come and Go**—The Chicago agency for the Oldsmobile received several carloads of machines from the factory this week, all of which were delivered in 2 days.

**New Buffalo Garage**—A new four-story building 60x80 feet has recently been completed in Buffalo, N. Y., and will be used for storing and repairing automobiles. It adjoins Brunn's carriage factory at Sumner and Main streets and is under the direction of the latter.

**Nearly Ready**—The new Chicago headquarters for the Wintons, Knex and Antecar are rapidly nearing completion. The Winton company will be able to occupy its ground floor this week, which will relieve the congested state of the Hayden store, the Winton temporary quarters.

**Chance for Somebody**—There is no automobile livery in Syracuse, N. Y., and one of the local papers recently published a letter sent by a motorist who, however, did not sign his name and who suggested that somebody ought to start a livery as it would not only be profitable but would also be a great accommodation for automobilists.

**Entertained With a Ride**—Eight officials of the Chicago custom house were entertained with an automobile ride by the Mead Cycle Co., of Chicago, last Sunday. A 10-12-horsepower Benz and a 14-horsepower Scarsden were used and a run was made to Elgin, Aurora and back to the city. The roads were found in good shape except a few short stretches. Between St. Charles and Aurora the party got lost and did not get back on the right road until about 10 miles had been run over the wrong course.

## TO RAISE SPEED LIMIT

### Chicago Authorities Now Suggest 12-Mile Ordinance But Seek To Impose Registration Fee

Chicago, June 13.—At a conference held last week, at which Acting Corporation Counsel William Sexton, Assistant Corporation Counsel Granville W. Browning, City Electrician Elliott and Health Commissioner Reynolds were present, it was decided to submit a proposition of revision of the automobile speed ordinance to the city council at its next meeting, which is to take place June 20. The four officials propose that the speed limit be increased from 8 to 12 miles an hour and that no license should be delivered to people having reckless dispositions, defective eyesight or are known to indulge in intoxicants and drugs.

City Electrician Elliott said that motorists of the present day are much more capable and have a better automobile education than those of only a year ago and that the tendency among the majority is to conform to the law instead of breaking it. "The complaints about reckless driving are numerous, but in proportion to the number of cars now in use is the city, the lawbreakers seem a very small number."

The law department is still of the opinion that the city has the right to regulate the operation of automobiles, although of the contrary opinion rendered by the courts. It has decided to get around the decisions by making

the ordinance requiring licensees entirely separate. The board of examiners of applicants for licenses will have its title changed to that of board of automobile registry, whose duties will be to examine persons making application in order to operate a machine.

A fee of \$3 will be charged for this registration, which is the same amount as was charged formerly for a license. Persons under 16 years will not be granted a permit under any circumstances. Every one operating a motor car will have to pass an examination at least once a year.

The applicants for a permit must also secure a number, which will be furnished at \$1 extra, and which must be attached to the rear of the car at a place where it can be easily read. Failure to comply with any provision of the measure will be punishable by a fine of not more than \$100 and the issuance of the offender's name from the list. It is probable the new ordinance will be referred to a committee, which will undoubtedly receive thousands of protests against the measure from Chicago automobilists, especially cluermen.

#### WENT IN THE DITCH

Cleveland, O., June 11.—F. E. Maskovics, of New York, went through Cleveland Sunday en route from New York to St. Louis. Mr. Maskovics is traveling in a Clement touring car and has been making rather fast time in the run. He endeavored to make a record between Buffalo and Cleveland, but went over an embankment near Painesville and had to lay up for repairs.

**Growth of One Firm**—Adams & Hart, of Grand Rapids, Mich., were for many years interested in the carriage trade, but in 1901 the first attempt was made with automobiles. They secured the agency for the Oldsmobile and were it not due to the fire which destroyed the plant of the Olds works, a score of cars would probably have been disposed before the season was over. In 1902 about twenty-five of the little cars were sold, while it is claimed three times that many were sold last year. The prospects for this year are that this number would be exceeded if machines could be secured. After handling the Mobile steamers for a while the company gave this line up and took the White agency, then the Winton. Later the Knox line was added, while in the way of electric vehicles the Pope-Waverly is sold.

**To Sell Austins**—W. R. Mason, formerly with the Electric Vehiele Co., has organized a company in Chicago, to be known as Mason, Harvey & Co., with headquarters at 1466 Michigan avenue. The company has the selling agency for the Austin touring car and expects to add a line of electric vehicles. It has a large, well-furnished store and an up-to-date repair shop and charging station, with an able corps of mechanics and electricians. This work will be a leading feature of the business. The company is well financed and its members are well known locally.

**Occupies Six Floors**—R. M. Cernwell & Co., 418 to 420 South Solina street, Syracuse, N. Y., have one of the largest automobile stores in that section of the state of New York. The enterprise was established 6 years ago and occupies six floors. Besides handling auto-

mobiles the firm has a large trade in motors, dynamos and accessories. Motor cars are stored and repaired in the premises, while an extensive renting business has been going on since the weather has become warmer.

**By the Car Load**—The Miller-Mundy Motor Car Co., of Utica, N. Y., reports some very good business within the last few weeks. Five car loads of Pierce cars were received last week and a large shipment of Cadillac machines is promised.

**One of the Fifty-Seven**—Charles L. Henshaw has started on a tour of New England in a Thomas Flyer in the interests of the E. R. Thomas Motor Co., of Buffalo. Henshaw has sold thirty of these cars in New England this season, Heinz, the 57 kinds of piekie man, being one of the buyers.

**Westerners Buy**—According to local reports the automobile trade is good in Kansas City and the surrounding country. Dealers complain about their inability to secure sufficient cars from the factory and also say that they are afraid to take new orders because back orders are already piled up. The only foreign-made motor car in town is a Clement-Bayrol.

**Will Reorganize**—A meeting of the stockholders of the National Capital Automobile Co. will be held June 20 in the company's office in the Bond building, Washington, D. C., for the purpose of considering a plan of reorganization—change of name, capitalization, extension of business, election of trustees and such other business as may come up. The present trustees are F. D. Stephenson, William Hitz, J. C. Wood and C. G. Stephenson, who are largely interested.



## THE READERS' CLEARING HOUSE

### GAUGING COMPRESSION

Pittsburg, Pa.—Editor MOTOR AGE—How may I test my engine to determine if the compression is at its normal point? The motor does not develop the power it once did and I imagine the compression has been reduced in some manner.—P. B. W.

The testing of the compression is a somewhat difficult operation to obtain satisfactory results, as so many elements enter into the conditions. The piston should be freed in the cylinder by injecting a small quantity of gasoline, or for this purpose kerosene is possibly superior, on account of its having some lubricating properties, as well as being a cleansing medium. The starting handle should be put into engagement, and should be revolved until resistance is felt on one upward stroke only. It is by the amount of resistance which is felt on the starting handle that the amount of compression in the engine may be judged. In order to obtain a correct idea of the amount of compression there is in the cylinder, a slow steady pull should be given to the starting handle—not a sharp, quick jerk such as is necessary in the starting operation.

In order to free the valves and to get the engine as nearly as possible into its free working condition, two or three sharp revolutions by means of the starting handle may be given to the engine, after which the compression stroke should be felt, and then a long steady pull on the handle taken, from which to judge the amount of compression. In doing this, the operator can steady himself by placing the left hand on the front part of the car frame, while with the right hand he grasps the starting handle. The amount of compression in the cylinder is judged by the length of time occupied in overcoming the resistance. Incidentally, the power of the operator is a factor which also enters into one's judgment. For a two, three, or four-cylinder engine, it is necessary that each cylinder should be tested independently. This is more easily done by inserting between the exhaust valve lifter and the valve stem a thin plate or a couple of pennies, which will give a sufficient lift to the valve to prevent any resistance from those cylinders which are not being tested, beyond the normal frictional resistance. By this means each cylinder may be tested separately. Another method of relieving the pressure is to remove the spark plugs. This may possibly in many instances be a more simple operation than that previously described. One may easily misjudge the length of time which elapses between the compression being felt and its release by depending merely on the physical strength of the operator. Hence the method of testing by "feel" is far from sure. What to a moderately muscled man may seem a high compression would to a man in good training be a mere nothing. So that, altogether, the testing of compression by this method is at best very unsatisfactory.

The only satisfactory method of ascertaining the compression in the cylinder is to have a socket made to fit into the spark plug orifice, this attachment carrying a small pres-

sure gauge, the dial of which is marked up to 100 pounds per square inch. This should be sufficiently high for most engines. The gauge itself should be screwed into the socket, so that the extra amount of compression space obtained by the use of the device may be as little as possible. It only now remains for the gauge to be screwed into the cylinder, and then for the operator to watch the highest point to which the index registers, in order to obtain the exact amount of compression of the particular cylinder under test. This figure, of course, will not correctly indicate the amount of compression which will be present when the engine is actually working, which will be higher than that indicated. No hard and fast line can be given as to the amount of compression which should be registered, for this varies with many engines according to the speed at which they run, and other considerations of design. The most satisfactory and practical way of finding out the condition of one's engine is to test the compression when the engine is in good running order, and to make a record of the compression, and to use this as a standard of comparison when the engine is out of order and needs attention, in the manner already indicated. Measures must then be taken to restore the engine to its normal condition of working.

### COMMUTATOR DIFFERENCES

Grand Rapids—Editor MOTOR AGE—Last season my car was fitted with a de Dion pattern non-trembler coil and platinum screw, which gave me endless trouble and caused my engine to lose power. On some journeys I had to adjust the screw fifteen or twenty times. This year I have had my car fitted with a trembler coil and wipe contact, which has given me no trouble whatever; in fact, my engine appears to have increased in power. What is the cause of this difference between the two methods, and why nearly all big cars are fitted with the wipe contact and the small cars with the old style of contact?—C. C. D.

From the frequency of the trouble with the platinum points of the trembler mechanism the current has probably been running in the wrong direction through the primary circuit, causing excessive sparking at the points and so burning them away. That is to say, the negative wire of the battery has been connected with the positive terminal of the coil instead of to the positive terminal, and the positive lead has been grounded. The trouble appears to have been too insistent to have been caused by faulty adjustment, although aggravated circumstances in this direction might account for it. In all make-and-break mechanisms the points should meet quite squarely, so that the whole of the opposing platinum faces come into contact, and not, as so frequently happens, with one edge against another, so giving very little contact. There are some very thin watchmaker's files which answer admirably for the purpose of filing platinum points flat and making them correspond correctly. Spring blades often lose their springiness, and, as a result, require endless adjustment. Apart from luck in obtaining

a really well-tempered trembler, an ever-present evil is the danger of the ignition cam running dry, when the trembler blade gets exceedingly hot—so hot, in fact, that the temper is drawn and the blade is ruined. Given a make-and-break contact properly adjusted, it is equal, so far as efficiency goes, to the wipe contact, but, whereas the slightest derangement or deviation from perfection in adjustment will make a great difference to the spark obtained with the make-and-break contact, a wipe contact is much less likely to get out of adjustment, while any variation in it has to be considerable to make any difference in the working of the coil carrying its own trembler. Beyond this the make-and-break gives but a single spark against a rapid stream with the majority of trembler coils. As the efficiency of the motor depends very largely upon the speed of ignition, and although a single spark should theoretically ignite the mixture as quickly as a stream, yet, if the spark is lacking in intensity, the stream, even supposing the sparks composing it to be at a lower temperature than the maximum, is more sure and more rapid in action, with the result that the engine power in the latter case is superior to that obtained by a make-and-break contact system. Thus the reason why large engines are but rarely fitted with make-and-break contacts is that each additional trembler means the presence of an extra adjustment, both delicate and uncertain, against which the fact that a much simpler and less delicate adjustment is required for a wipe contact must be placed. In the hands of some people the make-and-break gives most excellent results, and there is always the contention that it takes much less current to weigh in its favor. Perhaps the greatest difficulty of all with make-and-break on a large engine lies in the operation of starting. With a positive break it is necessary that the engine be jerked. As it were, over the ignition point, in order that a sufficiently rapid break to give a good spark may be obtained. With the wipe contact a jerking motion at starting is unnecessary, as when the circuit is completed a shower of hot sparks is produced through the agency of the magnetic trembler.

### USING THE CLUTCH

New York—Editor MOTOR AGE—When changing speed with a three-speed forward and reverse sliding gear transmission it is advisable to allow the clutch to engage slowly or should it be engaged as quickly as possible?—R. B. B.

When patting in a lower gear uphill, it is best to let the clutch in at once, otherwise the car slows and more shock is put upon the engine and transmission generally than if the clutch is engaged quickly. When changing to higher speed, however, it is best to let the clutch in gently, so that slight slipping occurs, particularly if the gear should be changed a little too soon before the car is going at about its fastest on the previous gear. When climbing, the car is going slowly, and if time is lost in the change it gets slower still, so that the load on the engine is heavier and altogether more of a dead load. However, it is always advisable to have the foot ready, so that one can allow very slight slipping if the engine begins to thump directly the lower gear is put in. This is not likely to occur in the ordinary way. When changing to higher speed, the aim is to increase the speed of the car as easily as possible, and therefore a slight slipping of the clutch is correct, as it allows this to be done. The matter is largely a question of sympathy between



THE VILLAGE OF LIMBURG



CASTLE AND TOWER, IDSTEIN

## TYPICAL BITS OF MOUNTAIN SCENERY



THE GATEWAY



THE VILLA ANDREE, KOENIGSTEIN



AT NAALBURG



## ALONG THE CUP RACE COURSE IN GERMANY



WEISBURG, FROM THE WEST



HOMBURG, FROM WINGERTSBERG

# BIRD'S EYE VIEW OF THE TA



SCENE OF THE 1904 JAMES GORDON

# RACE COURSE IN GERMANY



## ENNETT INTERNATIONAL CUP RACE

# ALONG THE CUP RACE COURSE



THE FIRST BAD TURN OUT OF SAALBURG



WOODY TURN ON COURSE—NEAR KIRBERG



ROAD AFTER START FROM SAALBURG



APPROACHING ERCH



FINE ROAD NEAR OBERURSEL



HANGOVER CORNER BETWEEN ERCH AND KOENIGSTELN



THE BRIDGE AT LIMBURG



A SHARP TURN IN WEILBURG



HILL LEADING INTO WEILBURG

the motor and the man. When one feels any sort of laboring on the part of the engine, he should prepare in the case of hill-climbing to put in the lower gear, or if one has just changed on to a higher gear, to depress the clutch just sufficiently to relieve the load without allowing the engine to race.

#### EFFECT OF SPARK GAP

Rockford, Ill.—Editor *MOTOR AGE*—Is the external spark cap injurious to a coil? I have been using one on a motor tricycle with a French style contact breaker and coil. The latter broke down suddenly the other day, and on testing it the defect was found to be in the secondary winding. An exactly similar occurrence happened to a friend a short time ago. In neither case had the coil ever been used in connection with more than 4 volts.—J. Rouen.

The external spark gap is more likely to injure a coil than when the coil is used without one. Owing to the action which takes place an increased electro-motive force is produced between the windings of the high tension circuit, and as the insulation is arranged to suit normal conditions, more risk is involved of damaging the insulation. If a wipe contact were fitted to the cam shaft, and a high speed trembler coil were used, there would be a very efficient spark produced and practically no adjustment required.

#### RADIATOR DISPOSITION

Los Angeles, Cal.—Editor *MOTOR AGE*—Is there any good reason for carrying the radiator below the frame in front? Some cars carry the radiator above the frame in front of the bonnet, but others have it low down as a sort of apron. In my opinion it looks very ugly low down, and I want to know whether there is any advantage in carrying it in this way?—C. G. F.

There is no advantage in carrying the radiator

below the front frame, except that the engine is more accessible on account of there being nothing in front of the bonnet. In other respects it is preferable to have the radiator placed above the frame and to fill up the space which would be occupied by the front of the bonnet, as the water is brought higher and a certain proportion of it at any rate is carried above the engine, so that the cooling system is not quite so dependent upon the proper running of the pump as when it is low down. On the other hand, however, the radiator when above the frame prevents a straight draft of cool air from striking the engine to assist in the cooling of it by direct radiation.

#### REPAIRING CRACKED CYLINDER

Krookuk, Ia.—Editor *MOTOR AGE*—Last winter during a cold spell the water jacket of the single-cylinder motor of my car was cracked. The engine itself is unaffected, but the water escapes slowly from the jacket. Can anything be done?—M. B. E.

A small crack in the water jacket of an engine is a more difficult matter to deal with than one which is of larger dimensions. In the latter case one can easily repair the fracture by means of what is known in the engineering world as a "rust joint." This is made by filling the crack with fine iron filings damped with a solution of sal ammoniac. This causes the surface of the fracture to oxidize, and with this the fine iron filings set in sufficiently hard to repair the fracture. In the present instance if the above treatment cannot, by reason of the narrowness of the fracture, be carried out, the repair will be more satisfactorily executed by simply soldering the fracture with hard solder. The surface of the jacket along the fracture should be filed bright and clean, and some acid soldering fluid run over the joint, if possible allowing it to run in through the crack, for which

purpose it would be advisable to form a V-shaped channel along the crack by means of the edge of a file. The jacket should be well warmed by the aid of a blow torch, and hard solder run into the fracture. If the torch is employed great care should be taken that the gasoline tank and the carburetor are completely emptied, and that no inflammable fumes arising from gasoline are about the car. Otherwise damage may possibly result.

#### GOVERNOR ADJUSTMENT

Elmira, N. Y.—Editor *MOTOR AGE*—I have a machine the motor of which is controlled by a governor working on a disk valve placed in the inlet pipe. At present the running of the motor is extremely erratic, as the governor seems to come into action suddenly and to cut off the mixture from the engine when it, of course, slows down and the valve is again opened. Could you give me any information as to the adjustment of the governor?—W. E.

The most likely cause of the trouble is that the governor weights are not sufficiently heavy to exert the force necessary to overcome the strength of the governor spring. The result is that the throttle valve is held nearly full open until such time as the weights have attained, by a high velocity, sufficient power to compress the spring, which, when the force is applied, shuts up comparatively suddenly, thus allowing the valve to close. The fitting of a lighter and more flexible spring in place of the present one will overcome this difficulty. The smooth running of the engine may further be secured by drilling a small hole through the butterfly valve in the inlet pipe. As a general rule this should be about  $\frac{1}{16}$  inch in diameter, which is big enough to allow sufficient mixture to pass the valve to keep the engine running smoothly. The disadvantage in this case is that the motor cannot be stopped by the throttle.

## WHAT THE LAW MAKERS ARE DOING

**Mile in 10 Minutes**—There have been many complaints about too fast driving in Baltimore, Md., recently. The police department has issued instructions that offenders be promptly arrested. According to the ordinance motor cars must not be driven at a greater speed than 1 mile in 10 minutes.

**Pretty Particular**—After July 1 owners of automobiles in Burlington, Ia., must secure a license from the state secretary. The following information must be given by the motorist: Name of owner, postoffice address, name of machine, manufacturer's number, horsepower, motive power, style of car, passenger capacity, general description, name of former owner, his postoffice address, number of former registration.

**Iowa Compromise**—The state automobile law recently manufactured in Iowa is a sort of compromise between the lenient and drastic laws of other states. It is good in the respect that the act is brief and to the point. It provides that the automobilist must register his car with the secretary of state, who will give him an aluminum trading stamp for \$1. This aluminum seal is not to be over 2 inches in diameter and it states that the automobilist has been formally and properly separated from his dollar and is henceforth to be known as No. —. This badge of honor is to be placed on the vehicle and must be supplemented by the usual number plate, which will also bear the initials of the state. It then



adding a white lamp in front, a red one in the rear, a bell by the side and a brake under foot, the automobilist is considered ready to tackle the highways, which he may use to the extent of 10 miles an hour in closely built-up sections of cities, 15 miles an hour in loosely joined portions and 20 miles an hour on the open road. He must use due sense and caution on bridges and corners and must not stand still on railway crossings "when the whistle sounds or the bell rings." He is furthermore subject to the "hand-up" stopping authority of the farmer, passing with domestic or other sacred animals. Non-residents are exempt from the registering clause if they carry the register of their own state.

**Sioux City's Law**—An ordinance concerning the speed of automobiles was recently introduced by the judiciary committee of the city council of Sioux City, Ia. It provides a limit of 6 miles an hour in the business district and 10 miles an hour in other parts of the town. A penalty of \$25 will be imposed for a first offense and \$25 to \$50 for each subsequent offense.

**After Scorchers**—The board of trustees of the village of Solway, just west of Syracuse, N. Y., is the latest in that vicinity to demand the enforcement of the ordinance regulating the speed of vehicles in the streets. Since the new tar-macadam pavement was laid from Solway it has been a favorite speedway for automobilists, and complaint was made that they were running so fast that they have become a menace to the safety of the people. If warning is not heeded arrests will be made.

**Think Law Invalid**—The case against D. C. Miller, of Grand Rapids, Mich., has been dropped by the police department of that city because it was found that if the ordinance concerning the licensing of automobiles were to come up in court the decision would be in favor of the motorists, as the law is considered invalid.

**Rather Discriminating**—City Attorney Wright, of Omaha, Neb., has rendered an opinion concerning the automobile law which was recently passed. He said that every automobile owner in the city must have a permit for each and every machine he owns. It was thought by some motorists that one permit covered any number of cars. The permits are not assignable and must be carried by the operator of the car at the time he is using it. Manufacturers and dealers may take out a permit for an automobile and after the machine is sold use the permit for another machine.





**Electric of Course**—Officials of the Western Union Telegraph Co. will shortly start on an inspection tour and will use for conveyance an electric vehicle.

**Banqueted the Winner**—The Georges Richard-Brazier concern gave a banquet in honor of Thery, the winner of the Ardennes race. There were nearly 600 guests, most of whom were employees of the company.

**Janatzy Burned Out**—Fire destroyed the electrical works of the Janatzy brothers, at Brussels, Belgium. It is reported that some valuable papers concerning recent inventions made by the two brothers have been lost.

**Has Hopes**—A German minister recently said that the motor cycle industry is becoming so important in Germany, and so many of these little machines are being used, that it will soon become one of the greatest industries of the Fatherland.

**Bullock Sparking**—The Bullock-Beresford Mfg. Co., of Cleveland, O., has recently issued several interesting circulars explanatory of the various forms of the Bullock igniter for gasoline motors, the original pattern of which was described in MOTOR AGE some time ago.

**How To Become Popular**—Automobile tours are becoming quite the fad among public officials striving for popularity. Mayor Alan C. Fobes, of Syracuse, N. Y., gave all the city officials an outing to South Bay a few weeks ago and Saturday afternoon Dr. Frederick W. Smith, health officer of the same place, took his subordinates out in automobiles.

**Broke Road Record**—Dr. C. J. Dove, on a Thomas motor cycle, and Ellsworth Adams, on a Columbia motor bicycle, broke the motor cycle road record from Muskegon, Mich., to Whitehall, Mich., by covering the 17 miles separating the two localities in 32 minutes, which is 2 minutes faster than the former record of Paul Stinson. Dr. Dove weighs 264 pounds and Mr. Adams 141 pounds.

**Miller Expands**—Charles E. Miller, 97 Reade street, New York, dealer in automobile parts and appurtenances, has leased another building, wherewith to open a new store, this time at 202 Columbus avenue, Boston, and he will thus be able to start a vigorous campaign right in the midst of the automobile trade territory of the Hub. The store faces on three streets and Miller expects to do business on all sides, working toward the middle, where will be a brand new burglar proof safe.

**Farmers Endorse Automobiles**—There was a meeting of the Madison County Farmers' Club at the home of Samuel Maag in Lafayette, Ind., last week which was interesting. The principal discussion was the reading of a paper on automobile laws by Martin Emmons, in which he endorsed automobiles but argued that the general public should be protected while on the roads. He claimed that most automobilists travel at too great a speed on the country roads and lives and property were endangered. The law of Ohio governing the running of motor cars was read and it was the opinion among those present at the meeting that the next Indiana legislature should be asked to pass a similar measure.

**Toured New England**—A successful automobile trip, lasting 10 days, was recently completed in a Winton touring car by a party consisting of A. F. Rockwell, manager of the New Departure Mfg. Co.; C. T. Trendway, J. J. Jennings, Judge R. S. Newell and Edward J. Schalk. The trip was from Bristol, Conn., to Lake Memphremagog, passing through Hartford, Barnet, St. Johnsbury, Lancaster, Barton and Newport, Vt., arriving on the third day. From Barton to Newport, although only 15 miles apart, the roads were so bad that it required 2½ hours to run the distance. At the lake the party rested a day. On account of clay roads it was necessary to rope the rear wheels of the car. The total number of miles traveled was 673. There were no accidents and only two punctures.

**Showed Them**—Automobile dealers and private owners of motor cars of Fort Worth, Tex., invited the city officials of their town and from neighboring localities to take part in an automobile parade in order to demonstrate to them how tame these lifeless animals are. A score of cars with nearly half a hundred passengers went through the streets of Fort Worth at various speeds, ending the afternoon with quick stopping and starting tests, which startled the officials.

**Johnson City Excited**—On June 6, between 3 and 4 o'clock in the afternoon, the first automobile ever seen by the inhabitants of Johnson City, Tenn., made its appearance in the streets of the town. Charles Nuchols was the guilty owner, on his way to a baseball game. His arrival created a sensation, stopping the game. A couple of local reporters started for the blacksmith-grocery-post-office-telephone bureau to send the news.

**No Drink, No Go?**—The South Bay Hotel, at Indiana Harbor, Ind., which has been a rendezvous of Illinois and Indiana motorists, has been refused a liquor license. The county commissioners decided that according to a recent decision of the Indiana supreme court liquor could not be legally sold in a building which did not face a street or an alley. The hotel does neither, being on the shore of Lake Michigan.

**Going to the Pike**—It is reported that many small parties of motorists numbering from four to eight, are presently on the way to St. Louis, Mo., in automobiles. A party of seven was in Schenectady, N. Y., recently and their presence was the cause of large gatherings of townspeople to take a look at the cars.

**Motor Cycle Corps**—An Austrian motor volunteer corps has been formed and consists of men and reservists who are otherwise exempt from military service. The motorists are to be ranked as orderly officers, with the pay of a lieutenant.

**Roulier Honored**—The Automobile Club of Marseilles, France, gave a banquet in honor of Roulier, the third on the French team for the James Gordon Bennett race, and Turent & Mory, the manufacturers of the car.

**French Cab Rates**—The rate charged by automobile cabs in Paris is 1 franc 25 centimes for the first kilometer.

**Good Trade**—More than 1,600 automobile licenses have been issued by the state secretary at Hartford, Conn., since the first of this year.

**Insured Drivers**—Insurance policies to the amount of \$272,000 were taken out for the drivers, mechanics and cars which took part in the French Ardennes race.

**Good Proportion**—At a recent automobile endurance test arranged by the Touring Club of Provence, in France, there were sixty-eight cars entered, fifty-two that started and forty-one that finished the run.

**After the Scribes**—C. E. Culver, advertising manager of the Knox Automobile Co., of Springfield, Mass., has been touring New England the last few weeks inviting newspapermen to an inspection of the company's factory to be held in another week, the exact date of which has not been set.

**Just Envious**—The Democrat, of Hamilton, O., says "an automobile is an nuisance of the very worst kind and ninety-nine out of 100 rural citizens will declare so. An automobile along the public roads is very dangerous to the public in general." The democratic gentlemen of the Democrat probably never were offered a ride.

**Nice of His Kinglets**—The King of Italy presided at the inauguration of the automobile and bicycle show at Bologna, Italy, May 23. In an address he expressed the belief that the automobile industry of Italy had become a very important factor and that everything pointed toward its ultimate success in all countries.

**Committeemen Pleased**—Members of the fire and light committee of the city of Montreal, Canada, inspected the fire stations of the town in automobiles last week. As there were half a dozen cars in line, the parade attracted considerable attention and the members were well satisfied not only because they had a ride but on account of the time gained by this means of conveyance.

**Demand for Second-hand Cars**—The sale of second-hand automobiles in Newark, N. J., is reported to be very good, and dealers are paying good prices for them as they are able to sell just as fast as they are received. The complaint is general that the factories are too slow in filling orders for new cars and that on account of it many people are cancelling their orders and purchasing second-hand machines.

**Castle's Surprise**—"Ex-Governor" Fred E. Castle, who has for the last 10 years been as closely associated with the sale of Twentieth Century lamps as the numerous buyers thereof, has resigned as sales manager of the Twentieth Century Mfg. Co., of New York, to accept a similar position with Gray & Davis, of Amesbury, Mass. Castle has an immense acquaintance in the bicycle and automobile trade on both sides of the Atlantic, and this severing of an old and pleasant connection for a new one will probably not interrupt his continuous enterprise in behalf of enlightenment. It will bring him more closely into touch with the automobile trade and he enters the new field enthusiastically.

# MOTOR AGE

VOL. V. NO. 25

CHICAGO, JUNE 23, 1904

\$2.00 Per Year

## UP SNOWDON IN A RUNABOUT

**A**FTER a creditable failure last January, Harvey du Cros, on a 15-horsepower English-made Ariel motor car, a fortnight ago conquered Snowdon, the monarch of Welsh mountains, after a struggle extending close to 4 hours. June 6, W. M. Letts, of the firm of Jarrott & Letts, London, in an Oldsmobile, squashed this vainglorious mountain by simply romping from base to summit in 57 minutes.

Mr. Letts was late in the field, but it is interesting to note that so long as 4 years ago he had conceived the idea of riding a motor car up Snowdon, and actually sent a friend, A. C. Slater, who accompanied him yesterday, to take the measurements of the track up Snowdon, necessary in order to enable him to select a car of proper dimensions for the task. However, Mr. Letts neglected to secure the honor of being first in the field of mountain motoring, so far as Snowdon is concerned, but he made up for lost time when he drove the little Olds to the top.

The task before Mr. Letts was complicated by the wide American tread of his car and by the position of the differential on the center of the rear axle, which necessitated the striding of the 2 feet 7-inch gauge line of the Snowdon mountain tram road unevenly, as had the car been placed evenly across the line, the differential box would have come into constant contact with the rack rail lying from beginning to end of the line in the center of the gauge. The result of this uneven striding of the line was that while the wheels on one side of the car had ample room on the ballast on their side of the track, the two wheels on the other side of the car were, perforce, dangerously near the edge of the ballasting, a position of considerable risk, and one which almost led at one stage of the ascent to a dangerous accident.

The car, as stated by Mr. Letts,



COMING DOWN THE MOUNTAIN



THE OLDS AND ITS DRIVERS AT THE SUMMIT

was an ordinary car taken out of stock and had not been strengthened or prepared for the trial in any way. It had previously been run on ordinary roads for about 50 miles.

Mr. Letts arrived at Llanberis about 10 o'clock on Sunday night by road in another motor car, and put up with his friend for the night at the Victoria hotel, occupied a fortnight ago by Mr. du Cros and his party. As Mr. du Cros had done, Mr. Letts obtained the permission of the directors of the Snowdon Mountain Tramroad Co. to make the essay along its track, and Mr. Aitchison, the company's manager, attended the trial throughout. As before, a special train was chartered by the experimenters to follow the car as far as it went. A start was made half an hour earlier than Mr. du Cros started.

The climatic conditions were equally as good as those which favored the du Cros trip. The final result was a revelation. Starting exactly at 6:57 a. m., the Oldsmobile waltzed up the one in eight grade at the commencement of the ascent, and at 7:11 stopped at Hebron Station in order to be assisted over the points there. In the case of the Ariel this operation necessitated the laying down of a number of planks, over which the car was carefully steered. The lighter weight of the Oldsmobile, however, enabled two or three of the men placed at Mr. Lett's disposal by Mr. Aitchison to lift the car clean over the points, and thus a great saving of time was effected, and a restart was made at 7:13.

At 7:14 another group of points had to be negotiated in the same way, but this time only a half minute was lost, and at 7:14½ the car was again going on its own power. Just before the halfway station, the car came across more points, but this time Mr. Letts drove through them without stopping or even slowing down.

Mr. Aitchison, however, anxious lest some of the points should have been deranged, stopped the special train for the purpose of examining them. They were, however, found to be intact, and the special drew up to the water house to take in water.

In the meantime the Oldsmobile was smoothly ascending the long slope ahead, and, during the 2 minutes stoppage of the train, disappeared over its summit, reaching Half-way Station at 7:33, just half an hour from the start, and going up the one in six grade as if traveling on level ground. The special overtook the Oldsmobile at Welsh Penn Llyn, where it had been stopped 10 minutes awaiting the train's arrival.

Another 5 minutes was spent here for photographing purposes; then on once more. At 7:55 for the first time the motor car was stopped for watering purposes. Not that the water was really needed, for barely an inch of the 3 gallons in the tank had been evaporated,

but it was thought well to let some of it out and refill with cold. This kept the car stationary for 9 minutes, and then at 8:04 it glided easily up the great 1½-mile stretch in fine style.

At 8:08 another stoppage occurred, owing to the necessity of planking over a wide open culvert which crossed this track. Restarting at 8:09, the Oldsmobile was again pulled up at 8:09½ in order to clear another open culvert, and advantage was taken of the stoppage to secure another photo.

At 8:12½ a fresh and final start was made, and then the final one in five grade was surmounted, and at 3:24 the Oldsmobile quietly drew up at the deserted Snowdon summit station, a considerable distance ahead of the laboring special behind.

From a comparison of the gross time taken in the ascent with the time lost in the various stoppages, and deducting the latter from the former, it is found that the Oldsmobile accom-

plished the 5-mile ascent in 57 minutes. It was found that it had not consumed more than a half-gallon of gasoline. It did the trip throughout on the low gear with the motor running at about 800 revolutions per minute, which is equal to about 6 miles an hour on level road.

Mr. Lettis is confident that if the culverts on the track were planked over beforehand he could make the ascent without a single stop. There was one extremely exciting moment in the ascent, when, nearing the summit, the differential case coming in contact with the rack rail and the car was deflected from its course on the very edge of a precipitous descent of about 1,000 feet. Here Mr. Lettis' coolness served him well, and by a great effort he succeeded in swerving into the straight again. At another point, owing to the looseness of the bellies, the light car bumped and bounded to such a degree that the driver had to hold the sides to keep his seat.

## ACROSS OHIO AND INDIANA



GOOD AND BAD ROADS IN OHIO

LEAVING Cleveland, O., first we encountered rain, then it was mud, and then dust. For genuine discomfort, dust is the worst of the three. I have heard of dust protectors so constructed that the occupants of an automobile are fully protected, but none of us had ever seen one, so we were at a loss how to construct one, and our effort, which took the greater part of a morning, which really meant about 50 miles, was wasted.

We had irons made at a local blacksmith shop and bolted them to the bottoms of our touring baskets, allowing them to project behind about 2 feet. Cloth was attached to these two irons, which prohibited the opening of the rear tonneau door while the improvised dust guard was in place, and necessitated the occupant of the seat behind clambering in either over the lampers on the side or over the back of the front seat, and getting out the same way. After all of our work the dust appeared to come in worse than ever, and we entered Toledo so coated with dust that we were hardly recognizable, and it is a wonder that the Ruddy house received us.

A valuable addition was made to our original outfit at Cleveland, where we secured a French searchlight, of the Continental make, and attached it to our dash by a revolving pivot,

allowing of the light to be thrown in any direction. With this searchlight it is a pleasure to run nights, as drivers can see us for miles ahead and get so far out of the way that we never see them at all when passing. It also enables us to see six telegraph poles ahead on a clear, dark night, and at least two poles ahead on a foggy night. At night stops, especially in the larger villages, a crowd is soon attracted by the searchlight within a short time of our arrival, as few have ever seen a searchlight in operation. In reading signs and guide boards at night it is especially valuable.

After leaving Toledo the roads were in excellent shape, much better than the average New York or Pennsylvania highway, an occasional sand spot being the only hindrance to very fast traveling. The highway skirts the Lake Shore & Michigan Southern railroad for many miles, frequently crossing the tracks, and races with freight and passenger trains was a constant pastime, we often beating the former, but being left behind by the latter, not, however, until we had conversed with the

passengers occupying the observation end of the rear Pullman.

The Ohio and Indiana horses, big, shaggy fellows, are very timid of automobiles, and it was necessary to slow down whenever encountering one on the highway, frequently necessitating our getting out and assisting in getting the animal past the machine, the drivers as a general rule, being poor horse handlers. It seems strange that these farmers, raisers of horses for the eastern markets, know so little about driving. I have heard of western horsemen and horsewomen, but if Ohio and Indiana are to be taken for example, give me the Rip Van Winkle farmers of the old Catskill mountain district, they at least not being afraid of the animal they are driving.

One point that a tourist notices in Ohio and Indiana towns is the well paved streets. Every village of 1,500 inhabitants or over in these states has at least one well paved street, and on the darkest night an automobilist can tell when he has reached the outskirts of a village or town by finding good pavement, generally brick blocks, underneath his wheels. The western cities are also as a rule much better lighted than the eastern cities and towns, large are lamps being located at almost every cross street.

EDITOR'S NOTE. This is the fifth in a series of articles by W. B. Harrison concerning a trip from New York to St. Louis over the world's fair tour route.

The city of Toledo is especially well paved and contains a large number of enthusiastic automobilists, many of whom will join the main body headed for St. Louis when it leaves Toledo on the morning of August 4. President Marshall, of the Toledo Automobile club, Secretary Wier and former President Wagar were among those to whom we are indebted for information concerning the conditions of the western roads and for maps of the best roads from that city to Ligonier, Indiana, which we found to be perfectly accurate in every respect.

In the Ohio oil region, through which our road passed, we inspected a number of oil wells, some working and others abandoned, and secured a number of good photographs. The road through this region being perfectly level, we were able to make excellent time.

Log cabins of the vintage of 100 years ago are plentiful in both Ohio and Indiana, still occupied and useful as dwellings. We wondered which one was the original birthplace of Garfield, as each looked identically like the one so designated in our grammar school history of years ago. Another class of strange buildings were the barns. Instead of being solid with a window in each end and a door on each side as are our eastern barns, these western barns are filled with windows, giving them much the appearance of a factory building instead of a storing place for grain.

Indiana seems to be a prosperous place for circuses, as we ran across either the circus itself or one or more of its advertising cars in almost every Indiana town at which we stopped. All seemed to be plying to a prosperous business, even the side show coming in for a good share of patronage, the farmers and their rigs flocking all over the circus lot.

At Toledo there are ample accommodations for the crowds that are expected to participate in the big endurance run and tour to the St. Louis exposition. At Wauseon, where the noon-day meal will be partaken, and at which place the great Barney Oldfield, as a youngster was raised and taught to ride a bicycle, the hotel accommodations are fair, but at Waterloo, Ind., scheduled for the night's stop, hotel rooms are limited as are also the seating capacities of the hotels. The Hotel Locke, while small, is well kept and the proprietor has already received letters from parties anticipating the big demand for quarters on the

night of August 4. At Keokukville, some 12 miles further west, and at Ligonier, about 29 miles west, ample and excellent accommodations can be found for those not fortunate enough to secure rooms at Waterloo.

There are good hotels at Goshen, scheduled for the noonday stop on August 5, and at South Bend, where the night will be passed, the Oliver hotel is the equal of anything in the country. At this point any repairs that are needed to either engine, running gear or

IN WESTLAKE PARK, LOS ANGELES



ENROUTE FROM SAN FRANCISCO TO LOS ANGELES

## TOURING THE

San Francisco, Cal., June 14—Greater interest is being taken by local automobilists in runs and tours than ever before. The majority of owners of cars have been following a beaten path, but this lack of familiarity with the surrounding country is due to the fact that interest in automobilism is still young in this section of the state and it is only now that the drivers are beginning to have confidence in their cars.

The run to Los Angeles will be made by a great many motorists this summer, who contemplate spending their vacation traveling in motor cars to the southern portion of the state.

George W. Starr of Grass Valley has been 5 weeks touring about the state and has traveled about 1,500 miles in his White steamer. He has gone as far as San Diego and has visited all the small towns on the way, traveling by the regular roads all the distance, ex-

cept from Los Angeles to San Diego, where he took the coast route down, returning by the inland route. The roads were found very good most of the time, excepting for a short stretch which was so sandy that the wheels of the car were sometimes almost covered in the sand. Little trouble, however, was experienced in getting out. While driving from King's City to Soledad there was a strong head wind and the motorist could not make better time than 12 to 15 miles an hour. An average

body can be speedily made, the city being the home of fine wagons and automobiles.

We encounter more tourists on the road each day, bound north, south, east and west. The majority of these parties are driving large touring cars, but we frequently encounter parties on trips of several hundred miles in cars no larger than our little machine. Most of these parties contain ladies, and from reports along the line it is safe to say that a good percentage of those touring to St. Louis this summer will be of the fairer sex. It is surprising how a woman can tour day after day over dusty roads with her wardrobe limited to what she can crowd into one small hamper and still look fresh and bright, but they do it and enjoy automobilism fully as much as the men—in some cases more.

In Archbold, a little Ohio town between Delta and Bryan, we tried a novel scheme to get a set of comic photographs. The greater part of the village inhabitants are Dutch, so Dutch that each and everyone you meet on the street remind you of the comic Dutch make-up on the vaudeville stage. We loaded our car with six of the most picturesque natives we could induce to get in, and while telling them about the pleasures of touring snapped their pictures, all smiling. We then aimed the camera at them, told them how frequently cars exploded and that ours was liable to at any moment, and that if they heard an explosion to jump for their lives. Upon our turning the starting crank they all jumped, at the first explosion, but, alas, one of them jumped directly on to the camera, breaking the plate and spoiling what would otherwise have been an excellent picture. No inducement would get another one to enter the car and all stood off at a considerable distance during the remainder of our stay in Archbold.

Tourists participating in the big run next July and August should provide themselves in every case with good goggles, especially if night runs are to be indulged in. The air between the hours of 5:30 and 8 o'clock, both morning and evening, is literally filled with small flies and bugs, that would blind a person for the time being if not protected by goggles. A goggle with sun shade attached is especially useful, as on windy days it is very difficult to keep a cap on one's head while traveling at a fast rate of speed, and the sun and flies are bothersome.

## PACIFIC COAST

of 50 to 75 miles a day was made, there being no intention of record breaking.

Fred A. Jacobs, accompanied by Mrs. Jacobs and G. A. Boyer, has returned from a delightful vacation trip through Lake, Mendocino, Sonoma and Napa counties. The start was made from Napa, to which point the party went by boat. The tour then extended upward to St. Helena and Calistoga and over the mountains to Healdsburg. From there the route was across the Russian river and northward to Cloverdale, Hopland and Ukiah. A short stop was made at Lewell Dell, and the trip was resumed to Lakeport on Clear lake. Highland Springs was the last locality visited before the return trip was begun. Mr. Jacobs said that great curiosity was displayed by the country people, some of whom had never seen an automobile. About 300 miles were covered. The car was a Rambler, of the 1904 tonnage pattern.

## IN MOUNT TACOMA'S SHADE



VIEWING ON LAKE SPANAWAY

**S**EVENTY miles southeast of the city of Tacoma, Wash., rises a giant dome of snow, its crest lost in flimy clouds flitting about it, or distinctly outlined against the spotless azure sky—the majesty of peace. Around it are many other peaks, noble in themselves and clad, even in summer, in the unsullied white mantles of perpetual snow. But they are dwarfs by the side of old Tacoma.

Down its rugged sides seven glaciers plow their age long course, giving rise to seven icy streams that tumble over rocks, leaping from hill to vale in sparkling waterfalls, tearing their way through dark canyons, rippling peacefully over pebbles or singing to the tree Dryads the song of the water-sprites.

Some seven thousand feet from the summit, Nature has provided a valley of rest, and man, entering, has named it Paradise. Here people from every locality come in summer to spend their vacations, to study the unusual and beautiful flora of the valley, to regain health in the bracing mountain air, to admire the scenery—for all reasons and for no reason—but not until this summer has an automobile climbed the rugged way that leads to Longmire Springs.

The most easily accessible road extends from Tacoma, through Spanaway and Eatonville to the Springs. It passes over broad prairies, dotted with symmetrical firs rising in green cones from the very ground, and pointing skyward with the directness of needles.

Smoothly and swiftly the touring car glides over the gravel road until a halt is made in the beautiful natural park surrounding Lake Spanaway.

More prairies stretch beyond as the car whisks on to Muck creek, where the soil loses its gravel and makes possible fruitful farms. Beyond the creek the road winds over the hills into the forest where firs and alders intermingle and where cedars drop long streamers of moss upon the heads of inoffensive travelers or strike with glee the face of the unwary chauffeur.

Yellow thimble berries, loved food of bears, grow by the roadside, and blackberry vines trail over the trunks of fallen trees, mingling their dark red leaves with the feathery moss

that carpets the ground. Delicate maidenhair fronds hide their tender greens behind the broad backs of their lusty brothers, the sword ferns, while the huge brakes grow so rank and coarse as to be fit only for the camper's bed. Everywhere the undergrowth is dense and luxuriant so that the sight of an occasional clearing excites wonder that man should have the hardihood to establish a home in surroundings so unpropitious.

Uphill and down, but at an ever-increasing altitude, the car speeds on, now crossing a mountain brook, now stopping at a spring for a draught of clear, cold water for the passengers. The noise of lumber mills is borne upon the air, the buzzing of saws is also heard, a giant fir goes crashing to the earth, and suddenly one comes upon a marvelous scene. In the foreground Lake Kipowin glistens in the sunlight, reflecting from its clear depths all the luxuriant vegetation that borders its banks. Beyond the sombre green of the firs appears Tacoma, every jewel of its snowfields sending a separate ray, but clear cut and distinct from edge to edge. All around it dark evergreens rise like a ruff, throwing into relief the stately mountain. So dazzling is this crystal crown that the eye seeks relief in the shadowed clefts where a blue haze trembles. The scene is

one of tranquility in its grandest form. At Eatonville, a few miles beyond, the car halts for the night. Within a year Eatonville has become a railroad town, and the little village is alive with bustle and stir. Here the traveler can find comfortable quarters for the night, awaking the next morning vigorous from the bracing air. The canyon of the Mashel, a mile or two away, is well worth a morning walk, while Ousel falls and the trout fishing in the river tempt the lover of sport and of nature to linger a few days.

For an automobile the most dangerous part of the trip lies between Eatonville and Ellicott, for here are 9 miles of hilly corduroy road.

From Ellicott the road over the table land to Messler's Mill is in fairly good condition, but from there to Longmire Springs the ascent becomes quite abrupt and the road takes on something of the character of a wide mountain trail.

At Messler's tired carriage loads of people lounge on the piazza, while jaded looking horses mournfully champ hay in the barn. Campers pitch their tents in the enclosure. Fast these belated travelers the car speeds gaily into sombre woods. Here the kind hand of the government has spared the giant cedars and colossal firs which have stood for centuries, scenting the forest with their aromatic odors and stretching ambitious heads into the clouds. Chipmunks scamper from stump to stump, orioles dart their yellow brilliance from bough to bough and, screened in his leafy covert, the thrush thrills out his evening song. Care free the motor party reaches the springs in time for the woodsman's dinner of bacon and beans.

In the morning the party leaves its machine in charge of the proprietor of the hotel and tramps up the trail to Paradise valley. Many a detour is made by the way, for Paradise river, so fitly named, stumbles and tumbles and rumbles over rocks and boulders, here a glistening silver stream hurrying swiftly to the ocean, there a mountain torrent leaping impetuously for hundreds of feet in misty falls and lashing with foam the rocks that dispute its course.

The valley presents many points of interest—the Camp of the Clouds, Gibraltar rock, Crater lake, and the the Misqually and Coalitz glaciers. The ascent of the mountain is difficult and dangerous, but many bold ones have scaled its heights and saluted the ten folds of their country's flag that crowns the summit. Having slept the sleep of the drowsy within the warm crater, they have added their



IN PARADISE VALLEY





A TURBULENT IN PARADISE RIVER

comes to the number already in the little brown box, and securely roped together, have retraced the snowy trail, sliding over huge blocks of ice, leaping a gaping chasm, or again clinging desperately to the icy gravel beneath them, as some accidental foot dislodges a sheltering rock that goes tumbling down the mountain side in some bottomless crevasse.

The only stopping place in the valley is a camp hotel, but here the party is made so comfortable that they pass all too quickly and it is found necessary to return to Longmire Springs and the touring car. Before starting for home, the machine is given a close inspection, and being ready for swift business, that kind of a trip is made down the picturesque slopes that lead to home and a clean shirt or shirtwaist, as the case may be.

#### EAST CALIFORNIA TRIP

Dr. C. B. Brown, of Portland, Ore., is a most enthusiastic motorist, and is not content with little around-home trips. His trip from San Francisco to Los Angeles and back at a time when the roads were soft from rain will be remembered by him and his companions, Mrs. Brown and a friend. It was a case of roped wheels all the way, with many interesting incidents but no accidents. The running time was 39 hours, though considerable time was spent on the road and in beautiful towns en route. After a short visit to the Cataline Islands, Dr. Brown and party returned over practically the same route, enjoying a tour of 1,700 miles through valleys, past acres of beautiful fruit and flowers, over mountain tops, fording streams at times and again running at express train speed over splendid roads.

#### IN THE WIDE SOUTHWEST

A 600-mile journey in a Winton touring car was recently completed by T. P. Mellon, proprietor of a big department store in Oklahoma City, Okla. He went from San Antonio, Tex., to his home over every imaginable kind of good and bad roads. "On leaving San Antonio," said Mr. Mellon, "I was skeptical of the outcome and had the car failed me, my enthusiasm would have gone glimmering. When I recall the streams, cedar brakes, rough roads, hills, mud and sand through which we traveled, I marvel at the success of my journey. Yet we had no discouraging trouble, even though we

had to have four mules to pull us up from the sand bank of the Red river, for here the wheels simply could get no traction. Many a time our chain was in the mud but the car went through without the slightest injury to the machinery."

#### CHEAP WESTERN TOUR

A few days ago Venning P. Holsis and a party of friends started from Chicago in a Fredonia car for Eldora, Ia., 400 miles from the windy city. The trip was made in 2½ days and on the last day 160 miles were run. For about three-fourths of the distance the roads were found to be good, although very hilly in some places. The only real repair that was necessary had to be made on the high speed clutch. One of the copper plates slipped out and became jammed. It took half an hour to repair it. Later on a bolt out of the canopy top was lost, and it required 10 minutes to get another, making a total loss of 40 minutes and a cost of 10 cents for repairs in a 400-mile run. There was used on the entire trip 27 gallons of gasoline, ½ gallon of cylinder oil and 1 pound of lard oil.

#### FORTUNE IN A THOMAS

A party consisting of William and Russell Fortune and Calvin T. Paxson, of Indianapolis, Ind., made an interesting trip a few days ago in a Thomasine. They left St. Louis, Mo., for Indianapolis, traveling during the day time only on account of the wretched condition of the roads, which at some places were almost impassable. In Indiana the roads were better and a speed of 28 miles an hour was reached between Terre Haute and the destination. The distance of the entire route was about 250 miles.

#### FROM BOUNDARY TO BOUNDARY

C. L. Roy, of Seattle, Wash., who started northward from Tia Juana, Mexico, May 8, as reported in a recent issue of MOTOR AGE, reached Seattle in good shape after having covered 2,255 miles in his Winton touring car. "We had no serious accidents and the repairs on travel amounted to practically nothing," said C. L. Roy, in speaking about the trip. "We felt so good when we reached the summit of the Siskiyou mountains that we thought the car was entitled to a name and we named her 'Old Tia Juana.' We believe we are the



THE KIND OF WHICH POETS WRITE



NEARING LONGMIRE SPRING

first to make the trip from the southern to the northern boundary of the United States, and that considering the condition of the roads and that nearly half the way was in the mountains, this is one of the hardest trips ever completed in an automobile. The car with its two passengers and the baggage weighed 3,200 pounds."

#### MOTOR CYCLISTS BUSY

The St. Paul Motor Cyclist Club is becoming extremely active and has planned a number of runs. They will average 50 miles, while the longest will probably be over a distance of about 85 miles. Two members of the club, C. L. Ege and George W. Wenger, have so far announced their intention of going to St. Louis on motor cycles. It was recently decided that no member may pass the captain or lieutenant except in a hill-climb or when over the full power must be used to negotiate a hard stretch.

#### INTER-CITY RECORD BROKEN

The record between Santa Barbara and Los Angeles, Cal., was broken by nearly 1 hour recently by Norman W. Church, F. W. Flint, Jr., James V. Baldwin and W. Burnham. A Peerless touring car was used by the motorists, who went via Carpinteria, Ventura, Camarillo, Newbury Park and Calabasas, where the party stopped at the Van Nuys hotel. The actual running time was 5 hours 33 minutes, while the elapsed time was 6 hours 26 minutes.

#### ALONG THE COAST

A trio of motorists of Los Angeles, Cal., consisting of H. P. Anderson, W. G. Nevins, Jr. and E. T. Stimson, recently are attempting to establish a record from San Diego to Seattle Wash., by using E. T. Stimson's Peerless touring car. The start was made June 8, and so far good progress has been made, considering road conditions.

#### ADOPTED MAPS

The Automobile Club of Southern California at a recent meeting adopted the maps made by M. P. Zindorf and covering all parts of southern California. They are as accurate as it is possible to make them. Mr. Zindorf spent 9 months at the work, which is divided into three section maps, Santa Barbara, Los Angeles and San Diego.



# MOTOR AGE

Published Every Thursday by  
THE TRADE PRESS CO.

1303 MICHIGAN AVENUE, CHICAGO  
Telephone Calumet 7011

New York Office, 120 West 34th Street,  
London Office, American Publishers Bu-  
reau, 25 Manor Park Rd., Harington, N.W.

MEMBER NATIONAL ASSOCIATION OF AUTOMOBILE MANUFACTURERS	MEMBER CHICAGO TRADE PRESS ASSOCIATION
--	---

Entered at the Chicago Post Office as Second Class  
Foreign Subscription, Four Dollars

Subscription, Two Dollars per Year  
Foreign Subscription, Four Dollars

Any Newspaper may obtain Motor Age through the  
Western News Co., Chicago, or any of its  
branches, on a returnable basis

## UNIVERSAL NUMBERING

**A**FTER the great American Derby had been run at Chicago and people of all classes had turned their faces homeward, some were filled with joy and others with sadness—and the cause may be imagined.

Of those whose spirits were high not a few were assisted into this state of bliss.

The long line of fashionable equipages which wended its way north on Michigan boulevard contained many a vehicle carrying revellers of both sexes, with and without coachmen and drivers.

A dashing bay team hauling two men and two women, one of the latter holding the reins, took its own way and its own gait, and each was frightful enough to cause a scattering among drivers, automobilists and pedestrians. Only the natural horse sense of the animals prevented disaster.

The automobilist, who owns his own machine, who has property at stake, who is as a rule a decent, sensible citizen, who has his faculties with him at most times, must needs be licensed to permit him to use the public streets.

The person with irresponsibility intensified by the aid of wine is permitted to use that same thoroughfare without the least restraint and with absolutely no means of identification should his name be desired.

The entire matter is wholly wrong, and this state of one-sidedness is in existence simply because the motorists have not dared to oppose, feeling no doubt that their case would hang by a slender thread if it hung at all.

It is recognized that the automobile has the same rights as other vehicles and no more.

A determined fight against class legislation of numbering and licensing of automobiles or an effort to have all vehicles numbered would bring about fair results within a very few days.

## THE MERGER SITUATION

**E**LSEWHERE in this paper is an open letter to members of the American Motor League from President Isaac B. Potter. It explains clearly the reason for the untimely hitch in the merger of the A. M. L. and the A. A.

The reasons are given by Mr. Potter are known to be facts.

Truncated roundsabout expressions the mat-

ter becomes simply that a certain clique in the A. A. A. have tried to take advantage of the membership of both bodies to foist a plan whereby the membership of the A. M. L., representing the foundation of the individual membership of the projected American Motor Association, would have nothing to say in the affairs of the new association, the club or A. A. A. membership being supreme.

No such intention was expressed in the original plan of merger, which was agreed to by substantially the entire membership of both bodies.

Those who originally brought about the attempt at merger recognized plainly the necessity of one strong national organization whose great membership should be its Gibraltar in public usefulness.

Great membership in a national body means individual membership. To deny individual members fair representation is to throttle such membership.

Any plan whereby clubs are given absolute control of a body whose ultimate strength must be in its individual membership is necessarily a suicidal plan.

To interrupt merger proceedings with such a plan, as has been done, plainly stamps itself as the endeavor of a few partisans to give the American Motor League the worst of the deal, even at the risk of ruining the strength of the projected organization.

A certain plan of merger was agreed to by the members of the A. A. A. and of the A. M. L. What right has a small party of the former to break faith with both its own and the membership of the other body by demanding terms bound to kill the merger if persisted in and to throw discord into ranks that should stand firm in harmonious endeavor for a common end.

The A. M. L. representatives in the matter have kept faith with all parties concerned. Will the A. A. A. membership allow a few representatives to ruin the whole plan of merger simply to carry out their own political end?

## ELEVENTH HOUR EXPLANATION

**O**N THE very day that the James Gordon Bennett international cup race was being run in Germany the racing committee of the Automobile Club of America issued a lengthy explanation of its reasons for declining to send an American team to battle for the cup.

In so doing the committee very plainly endeavors to make itself out a highly considerate, respectable and wholly conscientious body and to cast the entire blame for American non-representation on the entrants for positions on the cup team.

Perhaps the committee is right. Perhaps it is partly wrong. Who cares?

It has been obvious enough ever since that eminently humbling fiasco at the Empire City race track over a month ago that so far as James Gordon Bennett cup racing in 1904 was concerned America was down and out.

The best possible thing on earth would have been to have dropped the matter there and then. A squabble over responsibility was useless. The sooner the matter were forgotten the better.

At any rate, if the A. C. A. racing committee wished to explain the matter publicly from its own viewpoint, why did it not do so then and there?

Does it take a whole month for a racing committee to prepare a 900-word letter of ex-

planation of a very simple matter, especially after all the real facts in the case have been printed in hundreds of papers?

Is it just to the sport that the A. C. A. racing committee should dilly-dally with a report until the matter had ceased to be of current interest and then to bob into public print with a painfully plain explanation of its own course and of its view of the course pursued by the entrants?

Was it in good taste for the racing committee to make use of the very day of the big race to open a wound that had all but healed, to dig open a month-old grave and exhume an humiliation simply to show that it could take its own time to roast American automobile builders in an endeavor to prove its own righteousness?

There has been enough of this matter. If the A. C. A. racing board's eleventh hour explanation starts a discussion the racing board owes the sport an apology for its rather selfish and inconsiderate report of June 17.

Record breaking on a country road is all right, but when it has been brought to the point of speed of the last trip from Boston to New York it is time such attempts were made in the form of watch races so that they might have legal backing. Then permission could be secured to use the road and danger of accidents eliminated. Free lance mile a minuting on the country highway is wrong.

Count Chassis du Garage, who attended the Gordon Bennett cup race, returned the day of the race by way of one of Santos Dumont's air ships. He was so overcome with joy over the Motor Age scoop, however, that he was unable to write his story for this issue.

M. Jellineck, head of the Mercedes company, said before the cup race that there was a chance that Jentzky had been overtrained. His Jellinecks is a good guesser.

The coupes, broughams, traps, spiders and coaches didn't have it all their own way in Chicago Derby day; this time the automobiles had a good deal to say.

In a few years the present horse American Derby will have been changed into the automobile American Derby—stranger things have happened.

What a stirring up there would be in metropolitan automobile paper circles if Motor Age were to move to New York.

Anyhow, America saved a lot of money by not participating in the international race.

Administrative bodies ought to license horse-driving inebriates instead of automobilists.

Homburg, Germany—Special cablegram—Mein Gott in Himmel.—E. E. S.

Eighty-horsepower cars ought to be all the rage now.

No, nor any other old time, gentlemen.

There's theory was pretty good.

# Motor Car Family Trees

Nº 10  
THE  
KNOX



Stanhope—1902

Runabout—1901

Tonneau—1904

Three Wheeler—1899

Stanhope—1903

Three Wheeler—1900

Porto Rico Style Bus—1904

# GREATEST NEWSPAPER BEAT ON RECORD



"I received the news of the victory of Thery and the Richard-Brasier from Motor Age 15 minutes before I received a direct cablegram containing the same news."—E. B. Gallaher, Manager National Agency, importer of Georges Richard-Brasier cars.

"The result was a marvel in the way of newspaper and press work and general service."—Manager Ward, Laffan News Bureau.

New York, June 17.—Telegram—Motor Age—Congratulations on your enterprise with your Gordon Bennett race report.—Motor, by G. Von Utassy.

Motor Age of Chicago gave New York autoists a surprise yesterday, when its issue of this week came out with the complete story of the James Gordon Bennett cup race at 1 o'clock in the afternoon. It was a wonderful piece of work in the estimation of automobile people. As a matter of fact the printing of the Chicago paper was completed in New York. The papers were brought entire to New York with the front page blank and the cabled story was put into type in this city, and the entire paper went through the press to secure the first page impression. Five minutes after the last cable came to hand Motor Age went through the city complete in every detail, with photos of every contestant and the full story. The same thing was duplicated in Chicago. The eastern papers were all mailed in New York, so as to reach subscribers east of Buffalo this morning. Subscribers east of Omaha and as far as Buffalo also secured their papers today from Chicago. It was an instance of modern journalism which excited no little wonder, even in the east.—New York Globe, Saturday.

The first news of the details and outcome of the race was furnished by Motor Age, an enterprising Chicago trade paper, which printed simultaneous editions in its own and this city. The first of the papers containing a special cable from Berlin was delivered at 12:35 o'clock. Automobiles had distributed the entire trade edition among the garages before 1 o'clock.—New York Mail, Saturday.

"It was a great scoop and surely should profit the paper, for I believe the readers appreciate such enterprise even though all of them do not take the pains to say so."—L. J. Ollier, Manager Cadillac Co. of Illinois, Chicago.

"That is fine work."—James L. Mead, President Mead Cycle Co., Chicago.

"It was certainly one of the best examples of enterprising newspaper work of which I have ever heard." Colonel K. C. Pardee, Pardee & Co., New York and Chicago.

"The first news which members of the club who were at the club house on Friday received of the outcome of the race was from copies of Motor Age, delivered at the club a few minutes after 1 o'clock."—Robert W. Spangler, Assistant Secretary Chicago Automobile Club.

"That piece of work was as fine as silk, and is surely appreciated by the readers of the paper. When the copy of the paper was handed to me, Elmer Apperson happened to be sitting near me. I handed him the paper, and he read the cable story from the first to the last line with seemingly great interest. Then he figured out averages and sent a telegram to his brother giving him the result of the race."

—John E. Fry, Manager Chicago Branch of Apperson Bros.

The first news about the race was read by me in your paper and I think a lot of credit is due it for this scoop. Dealers, readers and everybody interested in automobilism fully appreciate such fine work even if they don't say so.—Manager Jameson, Chicago Store of Orlando Weber & Co.

In printing the above Motor Age lets others tell first of the manner in which it became the first of all American papers to distribute copies containing the cabled report of the James Gordon Bennett cup race, run in Germany last Friday.

In its issue of March 3, Motor Age said: "Next summer Motor Age will be in the mails with the story of the Gordon Bennett race before any other paper; and next winter it will

be in Madison Square garden with the complete history of the New York show before any other paper."

That Motor Age knew of what it was talking when it made the first portion of this assertion, is shown by the quoted comments above. Motor Age has enough confidence in itself to feel safe in now reiterating the second portion of the assertion.

In January, 1903, Motor Age distributed its complete show issue in Madison Square garden before the New York automobile papers.

In February of the same year it was the only paper whose show issue was distributed at the Chicago show, none of the eastern papers being able to get copies for distribution to the exhibition before late closing night, 11 at all.

Thursday, July 2, 1903, Motor Age was distributed locally and went into the mails with the complete cabled story of the James Gordon Bennett cup race of 1903, 24 hours before any other automobile paper was mailed, from 1 to 3 hours ahead of Chicago afternoon and evening newspapers.

In October, 1903, Motor Age was the only automobile paper in the country to publish in the current issue the complete story of the great endurance run, all of the other papers going to press with the story carried along as far as Erie, Cleveland or Youngstown, while Motor Age carried it clear to Pittsburg, going to press with the completed story on the night that the run was concluded.

In January and February of this year Motor Age duplicated the success of the previous year by being first at the shows, appearing at the New York show with a 112-page paper in two colors, containing a 25-page show story and a 2-page half-tone cut of the interior of Madison Square garden. The Chicago show number was of the same size and character, and there was no competition at all.

In its issue of April 7 Motor Age carried the story of the week's service test of commercial vehicles in New York further along by from 1 to 3 days than the other papers, notwithstanding that all but one of them published in the city where the trials occurred.

May 19 Motor Age was absolutely the only paper to publish the story of the fiasco whereby hope of an American team in the international cup race was abandoned.

Last Friday *MOTOR AGE* issued simultaneously in New York and Chicago a sixty-page paper with a fourteen-page story of the history of the international cup race; the teams contesting for the cup this year; the construction of the cars; the histories of the drivers; photographs of all of them; a description of the course, with numerous photographic views and a two-page, half-tone, birdseye-view map of the course; all of the details of the actual preparations and arrangements for running the race and a full-page, cabled story of the outcome of the big event.

The distribution of these papers began in New York at 12:35 and in Chicago at 1 o'clock. In both cases *MOTOR AGE* carried the news of the race to the garages, clubs, etc., ahead of even the daily papers of either city. It was not a race of *MOTOR AGE* against other automobile papers, but of *MOTOR AGE*, in magazine form, against daily papers, hurled in a fast stream of cheap "print" paper from big web presses.

Only one automobile paper made the slightest bluff at holding its issue to cover the event by cable, and this appeared in its own home, New York, several hours after *MOTOR AGE* of Chicago had been distributed there broadcast. The general distribution in New York of this other paper was not until Saturday morning, by which time *MOTOR AGE* was in the hands of all of its readers east of Omaha. The other automobile papers had made no attempt to cover the event. This week, these papers, in lieu of the mail story, which cannot arrive before next week, will warm-up the cable story, put a little rhetorical Mayonnaise on it and offer it to their readers as *salade de la scoop*.

It was a general beat of all of the newspapers and automobile papers. It represented a system of periodical production never equaled in class paper work, if in any kind of newspaper work. The issuing of complete papers after the closing of the last form was quicker than any previous performance, even in daily paper performance. In less than 3 minutes after the last form was "locked-up" in New York, the first copy of the paper was slipped into an envelope and handed to a messenger boy for delivery. Thereafter copies were turned out for delivery at the rate of 1,200 an hour.

One of the New York automobile papers the week before, probably having an inner feeling that it was going to be beaten and beaten badly June 17, printed an editorial statement that it would make no endeavor to hold the issuing of the paper for the cup race story, as, on account of its extensive edition, it would

be impossible to thereafter print and mail the whole edition on time. The rate at which *MOTOR AGE* produced its edition simultaneously in Chicago and New York is proof enough of the cheapness of the excuse thus offered. Either that paper has not the mechanical facilities which it claims to have, or it does not know how to use them.

*MOTOR AGE* knows how to use every facility at its disposal. This it has demonstrated by a consistent and continued series of newspaper beats on the occasion of every event of importance in automobilism. It has left the other automobile papers nothing to do but to take their medicine and say nothing, or to wake up. The New York Telegram gave *MOTOR AGE* a close run in New York—but a New York automobile paper—never.

The manner in which this beat of June 17 was accomplished is interesting as an example of quick publication. The entire edition was printed in Chicago with the exception of the first page, which was left blank for the cabled story to come. The regular forms were thus printed in Chicago Tuesday night and Wednesday, Wednesday afternoon enough papers to provide for the New York distribution among garages, etc., the New York newstands and all of the subscribers east of Buffalo, were bound, the front page being still blank, and packed in special shipping crates. These were expressed from Chicago Wednesday evening, reaching New York early Friday morning.

In New York a telegraph wire had been run into the printing office from the Laffan News Bureau, through which special cable service was to be obtained. In Chicago another telegraph wire was run into the printing office there. Thus the scene of the race, the Laffan News Bureau and the New York and Chicago printing offices were connected by wire directly. As fast as cablegrams arrived at the New York printing office they were set on linotype machines and simultaneously were retransmitted word for word to Chicago, where they were also put into type.

After the receipt of the last message it was but the work of a minute to put it into type and "lock-up" the one-page form, which, of course, was hurried to a press all made ready for it.

In New York four automobiles had been on hand for some time to be ready for quick service when needed, and a bunch of messen-



DELIVERING PAPERS TO CHICAGO GARAGES

ger boys had been shooting pennies to while away the time until they were hurried off on quick deliveries of individual copies that were to be specially rushed. For the use of the automobiles *MOTOR AGE* is indebted to the kindness of Charles Wrigley, manager of the New York establishment of Banker Bros., who furnished a Peerless; Manager Davis, of the New York Knox branch; Charles Duerr, of the Duerr-Ward Co., who personally conducted a Royal Tourist; and Chester Boynton, of the Worthington Automobile Co., who was on hand with a big Herg car.

As previously stated, it was not 3 minutes after the closing of the form before copies of completed papers into which the front page had been printed were taken from the press. The messenger boys were hurried out with the copies they were to deliver and then the automobiles left in quick succession, each with a bundle of papers to be distributed in a different section of New York automobile garages, etc. With the local distribution copies out of the way, the production went on with the mail copies, and those for the New York newstands. By night the whole eastern mail edition was in the postoffice on its way to the readers.

At Chicago almost the same process was followed. Here the first paper was delivered at 1 o'clock and the last of the locally distributed ones delivered at 1:15, all of the local stores and garages having been covered. For this job a St. Louis car furnished by the Chicago agent, Charles P. Root, was used. As in New York with the eastern edition, in Chicago the western mail edition was completed and mailed that evening, so that every subscriber of the paper not more than a night's mailing distance from either New York or Chicago, received the paper the first thing Saturday morning, or at the same time that he would receive a New York or Chicago morning daily containing the same story. *MOTOR AGE* was on the street in Chicago 2 hours before the dailies with the race results.

While *MOTOR AGE* does not expect many of its readers will go into the publishing business and therefore find practical value in the method of production above briefly outlined, it is cheerfully recommended as a good tip to the New York automobile paper whose "edition is so large" that it cannot print up-to-date matter. There are other ways, too. *MOTOR AGE* is saving one of them for the next New York show.

It is now duly up to the other automobile papers to begin to busy themselves or to keep everlastingly quiet.



WAITING TO DELIVER PAPERS IN NEW YORK



# EVIDENCE OF BROKEN FAITH

## President Potter of the American Motor League Explains the Hitch in the Merger of That Body with the American Automobile Association—Attempt to Violate Original Agreement

To Members of the American Motor League—As announced some weeks ago an agreement was made between representatives of the American Motor League and the American Automobile Association for the merging of these two national bodies into one. The conference committee agreed upon a plan of merger, and this plan was submitted to the membership at large in both bodies for approval. It had been carefully prepared to meet every possible contingency. The executive boards of both organizations approved the plan submitted by the conference committee and requested the assent of the membership at large "in order that the merger may be completed and the work of the united body set in motion as promptly as possible." By an almost unanimous vote both the merging bodies ratified the action of the executive boards and approved the plan of merger. This plan included two or three paragraphs which it now becomes important to consider. They are as follows:

3.—The general management and control of the affairs, funds and property of the united body shall be vested in a governing board, to be composed of ten directors to be appointed by the A. M. L. and a similar number to be appointed by the A. A. A. [The twenty directors to compose the new governing board were appointed by the concurrent action of President Whipple, of the A. A. A. and President Potter, of the A. M. L.]

4.—A committee consisting of two members selected from the present membership of the A. M. L., and a like number selected from the present membership of the A. A. A., shall prepare a constitution and by-laws to serve the purposes of the united body, and shall present the same to the governing board for its adoption. The constitution and by-laws so adopted shall remain in force until amended or superseded at a regular or special meeting of the united body, upon due notice. Such constitution and by-laws shall, among other things, make due provision for the continuance of clubs, local organizations and individual membership in the American Motor Association, and shall harmonize as closely as practicable with the constitution and by-laws of the A. A. A. and A. M. L. as framed prior to the merger of the two bodies.

Pursuant to paragraph seven a committee of four—two from each body—met to prepare the constitution and by-laws for the new association. It then transpired that the gentlemen representing the A. A. A. upon this committee had specific instructions which appeared to be contrary to the merger agreement. They informed the A. M. L. members of the committee that they were not at liberty to prepare or propose any constitution and by-laws which provided—as the league constitution now provides—for representation of the individual members of the association by delegate at the general meetings of the national body. In other words, they proposed a constitution which permitted delegates from clubs to cast the entire vote of the clubs which they might represent, but prevented individual members from having a voice in these meetings unless they should be personally present, no matter how far distant their homes might be located from the place of meeting. In view of the fact that the A. M. L. constitution and by-laws now provide that individual members shall be represented by delegates, and that the plan of merger requires that the new constitution and by-laws shall contain this provision—as well as provision for club representation, which the

league is willing to concede—our members upon the committee were clearly without power to assent to any plan in direct violation of the merger scheme which had been submitted to our members and by them approved. Our members on the committee believe that the committee should act entirely without instructions or limitations excepting those contained in the merger agreement, and that any disagreement arising in the committee should be decided by the governing board under the provisions of paragraph seven as quoted above. This is the present situation and we hope that our friends in the A. A. A. will appreciate the fairness of our position and proceed with the merger plan in the spirit and language of that instrument.

Right here it is proper to say something on the question of organization. All the automobilists in this country should be united. Nothing can be attained without a determined effort in the face of the prejudice and opposition which we are meeting with on every hand. More than 90 per cent of the automobilists in this country are not members of any club or clubs. Clubs should be encouraged, but the fact remains that automobile clubs up to this time have not been remarkably successful. If automobilism is to be placed upon a sound and permanent basis and fair play secured to the users of motor cars, the great mass of individual owners and users who are not club members must be brought into the national body and their support enlisted. To do this has been the aim of the A. M. L. and we are now represented in more than 600 cities and villages and in more than forty-eight separate states and territories. Our merger agreement with the A. A. A. provides that three members shall be represented in the affairs and meetings of the new body, and by that provision of the agreement both parties are bound. This statement has been prepared because a somewhat obscure understanding of the situation seems to have found lodgment in the minds of certain newspaper writers whose source of information has not been the best. It can all be summed up in a single paragraph:

The league is ready and willing to stand by the terms of the merger agreement which has been submitted to and approved by the executive boards and memberships of both bodies. Neither the officers of the

league nor of the A. A. A. have any right or authority to consummate a merger which violates the terms contained in the plan of merger so approved.

This is the situation as it exists at this time, and only the authority of the affiliating bodies can alter the plan of the proposed merger.—ISAAC B. POTTER, President American Motor League.

## NASHVILLE INITIATED

Nashville, Tenn., June 18.—The first automobile parade and the first automobile track meet ever held in Nashville were pulled off Tuesday and both were successful in every way.

Thirty cars were in the line for the parade and they made a good showing with their decorations, which consisted in each case of one United States and one Confederate flag. The annual Confederate reunion was in session, and about 5,000 visitors were in the city. As a result the streets were crowded to the very middle with people and wagons, but the parade passed off without a hitch or an accident of any description. This fact, local automobilists hope, will be remembered by the Tennessee legislature when it is in session next fall.

The race meeting was held in the afternoon at the Cumberland park track and more than 2,000 people witnessed the contests, some few of which were wildly exciting. Unfortunately there was one accident, but it was not serious. Jack Suth, going at top speed, on a motor cycle, tried to run over a runaway with disastrous result. Both machines were damaged and Suth was thrown thirty feet up the track and his wrist broken.

Otherwise the meet passed off smoothly, but slowly. The management had had little experience in handling such affairs and there were innumerable and annoying delays.

John Landis with a White car, John Chester with an Olds, and John Rainey with an Indian motor cycle, came pretty near being "the whole shew." The only other man besides these three who won a race was Preston Dorr, a St. Louis car.

The best race of the day was a 5-mile motor cycle event, in which Jack Suth on a Hercules and John Rainey on an Indian, competed. The two men repeatedly passed the grand stand neck-and-neck, and the race was won by Rainey on the Indian by only five lengths.

The two races for light cars were won easily by John W. Chester's Olds, which ran away from an Orient buckboard in one race and an Eldridge in another.

The best automobile race of the day was the third, in which there were eight entries. It was run in heats, and in the first heat it looked to be easy for Danes Dorr in a St. Louis, as he ran away from his field for half of the



HARRY HARKNESS ON HIS RECORD TRIP FROM BOSTON TO NEW YORK

distance; but his car was new, and a bearing heated, and he had to quit. Mr. Landis' White and Preston Dorris' St. Louis qualified in the first heat, and Mr. Hume in a Rambler and Mr. Chester in an Olds in the second heat. In the final heat the St. Louis car won.

Only two of the five cars which started in the 5-mile race for stock cars, 2,500 pounds or under, finished the race. A new St. Louis car dropped out with a hot joint, a Cadillac quit and a Rambler broke a crank. John Landis in his White won a hollow victory. Mr. Landis also took the sixth race, for which a \$150 cup was offered.

After the seventh race the accident happened to Ruth and as it was late at that time the rest of the events were called off.

### JAPANESE LASY WINNER

New York, June 19—There were fourteen starters in yesterday's power boat regatta of the New Rochelle Yacht club, which was run on Long Island sound under perfect weather and water conditions.

F. H. Waldorf's Japansky, Standard, made the best time over the 19-mile course, 1 hour 9 minutes 30 seconds; W. K. Vanderbilt, Jr., Hard Boiled Egg, Moss, second best, 1 hour, 20 minutes, 3 seconds; and Robert Jacob's Miss Swift third best, 1 hour 23 minutes. Mr. Vanderbilt raced his own boat. H. A. Lozier's Shooting Star and Harold Brown's Dolphin II turned the home stake wrong and were disqualified. The results follow:

Class 1, course 19 miles—Japansky won. Time, 1:09:30.

Class 2, course 19 miles—Hard Boiled Egg won. Time, 1:20:00. Water Lily withdrew and Shooting Star and Dolphin II were disqualified.

Class 3, course 19 miles—Aletes won; Queen Bess, second; Allure, third. Time, 1:44:32.

Class 4, course 19 miles—Miss Swift won; Ardis, second; San Toy, third. Time, 1:52:00.

Class 5, course 1/4 miles—Teaser won. Time, 1:17:28.

Owing to a clash of dates with the American Power Boat Association's challenge races and the Automobile Club of America's trials of the American team candidates for the Harmsworth international championship, the dates of the match races between the Smith & Mabley Simplex and Hollander & Tangeman's Fiat boats for a \$2,000 gold cup have again been changed. They are now set for June 27, 28 and 29 over the Larchmont Yacht Club course. Smith & Mabley will show the A. C. A. committee the paces of their Harmsworth cup challengers, the "Smith & Mabley Challenger" and the "Vingt et Un," on July 22.

Practically all the motor racing boats now in commission hereabouts are entered for the challenge races of the American Power Boat Association, which occur on Thursday, Friday and Saturday of this week.

### AFTER NON-STOP RECORD

New York, June 19—F. A. La Roche and A. L. Picard, president and sales manager respectively of the American Darracq Automobile Co., have announced their intention of starting some day toward the end of this week on an attempt to score 1,000 miles in a non-stop run between this city and Boston. They will alternate in driving the Darracq "Blue Struck" racer, which is said to have been driven on track and straightaway over courses in this country over 8,000 miles. Each will take a Boston-New York relay, going over the course four times in all to make the 1,000 miles. The idea of the attempt is to test the endurance of the engine and not the men.

## HARKNESS THE LATEST Record Between Boston and New York Slashed by Two Com- plete Hours on Monday

New York, June 21—Harry S. Harkness, of this city, who has won fame as a track racer and a designer of an original racing machine, made a big cut yesterday of the Boston to New York record. Driving his new 60-horsepower Mercedes car he made the run of 244 miles from the Boston Athletic Club to the Central Bridge in 6 hours 41 minutes elapsed time, and 6 hours 4 minutes running time. The previous elapsed time record of 10 hours 40 minutes was held by Harry Fiedick and the Winton, and the running time record of 8 hours 42 minutes by C. A. F. Philzenmayer and the Locomobile. Fiedick's running time was 8 hours 54 minutes. Mr. Harkness drove his car to Boston on Friday to study the course. He left the B. A. A. at 3:15 a. m., having with him his chauffeur,



A STRETCH OF ROAD NEAR CAMBRIDGE, MD.

Joseph Jagersberger, who sat on the floor strapped in. Two stops of consequence were made to repair tires, one of 18 and the other of 19 minutes.

Telling of his ride, Mr. Harkness said: "We left the club in Boston at 3:15. At the very start we made speed. It was dark, of course. I didn't carry a headlight. I could see well enough ahead.

"Through the Boston suburbs we flew along at 60 miles an hour. The police were bobbing up all along. To get by them I ran close to the curb, just a few inches away. The trees and telegraph poles served to shield us. We began to have trouble before we got to Marlborough, where we lost the road. Only one foot brake was working. The other was clogged and the hand brake was gone. Then the hood over the motors kept lifting, flying back in our laps. Jagersberger held the time was lying over on top of it holding it down. Next time we'll strap it. The vibration would loosen the fastenings, and the wind would throw it up.

"We got to Worcester at 5:05. At Windsor Locks we had a puncture. We fixed it in 8 minutes, nearly record time. Then we were off again. We got to Hartford at 6:54. I ate half of a sandwich, drank a little milk and took on some gasoline and water. We were away at 7:04. We had another puncture at North Haven and fixed that one in 19 minutes. Luck was with us.

"It was 8:10 when we hit New Haven. On

the level and down grade we made great time. We got to Stamford at 9:19. When we neared New Rochelle we slowed up. We knew we had the record and didn't want to be stopped. We came down through the Bronx at 10 miles an hour. It was just 10:10 when we reached Central bridge."

His best run was the 53 miles from Worcester to Springfield, which he covered in an hour. The average time was about 43 miles an hour. Mr. Harkness declares that his speedometer registered as high as 83 miles an hour. The time at the start was taken by the Chronograph club.

### FIRST MOTOR CYCLE RACE MEET

New York, June 20—The program of the annual meet of the Federation of American Motorcyclists, to be held at Cambridge, Md., July 8 and 9, has at last been completed. The first item on the program for Friday, July 8, is a launch ride and a swim before breakfast. At noon there will be an oyster and crab roast at Hooper island on Chesapeake bay. At 3 o'clock, straightway trials on country road, if in good condition. An hour later there will be a business meeting, followed by the annual election. This will occur in Phillips hall. The interesting events on the program for the next day are the annual photographic contest, a run to Cook's point over 18 miles of fine roads, a swim in Chesapeake bay, race meet at Hambrook driving park, and a run to Singer's vineyard. The meet will be the first exclusive motor cycle affair held in this country and comprises the following races and competitions: Two-mile novice, open only to single cylinder machines; 5-mile handicap; 8-mile slow race; 10-mile team race; teams of three men using single cylinder machines; 5-mile pursuit race for single cylinder machines; 1 pint gasoline consumption test; trial for track record for single cylinder machines; trial for track record, and hour record. Entries for these races will close July 5 with H. H. Wright, Cambridge, Md. The straightway trials will take place on a stretch of road about 3 miles out of town. The 1/4-mile track has a wonderfully hard, smooth surface of clay and while not baked as high as might be desired is nevertheless fast, inasmuch as miles have been ridden on it in 1:42 and 1:45 without trouble.

### AFTER THE RICH

Providence, R. I., June 18—The police of the various cities and towns of the state have begun to be a little nervous over the failure on the part of some automobile owners to have their machines registered, and in Newport owners have been asked where their numbers are. They all say that they have not received the plates, although they profess to have secured the necessary certificate. It has become known also that there many in the state who are depending on their New York and Massachusetts numbers to carry them along, but as many of these people are legal residents of Rhode Island the numbers from other states are not good. In Newport, where the chase after automobile owners has been persistent and thorough, the rich residents from New York, who in many cases are voters in Rhode Island, are particularly liable and the Newport police say there will be something in the nature of an earthquake there unless something is done at once. Almost all of the plates have arrived and have been distributed, but the police of Providence have made no attempt to stir up the animals up to the present time.



## ARRESTS ARE ILLEGAL

### New Jersey Officials Liable in Holding Motorists Unless Armed with Proper Warrants

East Orange, N. J., June 19.—George E. Farrington, president of the Automobile Club of New Jersey, is distributing among the members of the club and the state and metropolitan district fraternity generally copies of a legal opinion of James E. Howell, one of the leaders of the New Jersey bar, of the proper interpretation to be put on the Terrill act, which is the automobile law of the state. On the basis of this opinion Mr. Farrington says that "any member of the club who has been arrested and fined, and who does not take proceedings to compel the restitution of the money, and to hold the justice, the constable or other officer responsible for false imprisonment, apparently fails to enforce his legal rights."

Mr. Howell's opinion is to the effect that the Scovel act is not a criminal act, but a penal statute; that an automobilist is not subject to arrest for a violation of the speed limitations without a warrant; that the officer making an arrest makes himself liable to an action for false imprisonment by the automobilist whom he arrests, and that the officer is not protected from suit by his official character or title, is of interest to every member of the club.

The constable or other officer who, without a warrant, arrests an automobilist on the highway is the law breaker, and makes himself liable to proceedings both criminal and civil by the automobilist.

Quoting in full his letter to President Farrington on the subject, Counselor Howell says: "I have your letter of June 21, inquiring whether under the Scovel automobile law an officer has a right, without a warrant or summons, except as provided in section 11, to arrest an automobilist on the highway."

"I have your letter of June 2, inquiring as to state my views of the question you present. In my opinion there is but one case which will authorize an arrest under this act without a warrant, and that is the case mentioned in the ninth section of the act. It provides that a person driving a motor vehicle, in certain public places named, 'in a race or on a bet or wager,' shall upon conviction be fined \$50 and imprisoned in default of payment of the fine. Section 11 provides that in case of the violation of the ninth section the officer may arrest without a warrant. The officer making such arrest must immediately take the person so offending before the magistrate and make a complaint which must describe an offense forbidden by the act, upon the filing of which the magistrate shall then issue a warrant returnable forthwith, and the complaint shall then be heard in the regular way.

"An officer making an arrest without a warrant for any violation of the automobile act makes himself liable in an action for false imprisonment. He becomes at once a trespasser and is not protected from suit by his official character or title.

"The Scovel act is not a criminal act and does not create or provide for the punishment of crimes or misdemeanors. It is a penal statute and, while possibly the proper officer may have a right to arrest a man who commits a crime in his presence, he certainly has no right without the authorization of some statute to arrest a man who is violating a penal statute. As a

matter of practical application I do not see how an officer would ever be justified in making an arrest under this statute, without a warrant, because he would never be able to prove, except in the baldest case, that the violation complained of was 'in a race or on a bet or wager.' If two automobilists were seen upon the highway actually racing the case would be different.

"It is quite manifest that the ninth and seventh sections of the act were purposely designed to prevent racing and betting, and a drastic provision was made for those offenses, but for every other violation there must be a warrant."

### EDISON TURNED DOWN

Washington, D. C., June 18.—Much to the surprise of those who have been watching the case, Thomas A. Edison has lost his appeal to the patent office, notwithstanding the fact that the president of the United States had interested himself in the matter, as related at the time in *MOTOR AGE*. It will be remembered that Mr. Edison charged "incompetence, neglect of duty, and maladministration of office in connection with the grant of United States letters patent to Ernest W. Jungner, for a reversible galvanic battery, No. 738,110, dated September 1, 1903." In connection with the three charges, Mr. Edison complained of the declaration of interference between one of his applications and the parent application of Jungner, and asserted that the declaration of this interference was improper, and assisted in showing that the examiners were incompetent. He further complained that it deprived him of the opportunity of showing that Jungner's invention was inoperative.

The findings of Acting Commissioner of Patents Moore, to whom the matter was referred, were that there was no evidence of malfeasance or intentional wrongdoing on the part of the examiners, and that the second and third charges were not sustained and should be dismissed. As to the declaration of the interference, it was found that "the examiner in view of all the circumstances did not depart from custom and acted in accordance with the dictates of common sense, and that Mr. Edison was not deprived thereby of an opportunity of making a further showing as to what was contained in the Jungner application, but, on the contrary, was expressly given the opportunity and failed to take advantage of it."

As to the first charge, it was found that the examiners failed to appreciate the nature of the enlarged description of the Jungner patent, and that they should have appreciated the effect of this enlarged description, and the charge was sustained only as to this particular.

The names of the examiners were not made public.

### WILL GO IN CARS

Syracuse, N. Y., June 20.—Harry C. Pierce is meeting with success in his efforts to have a party of Syracuse automobilists make the trip to the Poughkeepsie regatta in cars. At South Bay when the Automobile Club of Syracuse held its first run to the Sagamore Inn, Mr. Pierce talked with a number of the members and received assurances from several that they would make the trip. Mr. Pierce is now making arrangements for hotel and carriage accommodations along the route. The Poughkeepsie races are to be held Tuesday afternoon, June 28, and it is planned to start from here Sunday.

## TRIES TO SQUARE ITSELF

### Racing Committee of A. C. A. in Delayed Report Seeks To Justify Its Cup Race Action

New York, June 19.—On the day of the international cup race the Automobile Club of America sent to the press the report of its race committee in refusing the club's endorsement of an American team to represent it in the Homburg contest.

#### The report follows:

The racing committee was instructed to make a moderately severe test of the automobiles applying for permission to represent America in the Gordon Bennett race in 1904. It was felt that the very poor showing made in that race last year could not be repeated again.

The committee was asked to go to Cleveland, as two of the three competing cars were there and it would save their owners a large expense. Messrs. Butler, Morris, Gotschall and Kennedy, representing the committee, went to Cleveland. Prior to their going, the committee had been in receipt of letters to the effect that the applicants' machines were in perfect condition and stood ready to stand any test to which the committee desired to put them.

The committee decided to make a test over the roads, so as to have the conditions as nearly as possible similar to the ones that would be met abroad. The committee felt that the machines should be able to go through the city and over the country roads as well as show an exhibition of speed. The contestants were told of the decision of the committee and the Peerless representatives agreed to carry out their wishes, but the Winton company refused to do so. The committee, in view of the letters it had received expressing a willingness to undergo any test it might desire to impose, was greatly surprised, and thereupon asked the Winton company what test it would suggest. They were told that the Winton company would send its machine over a certain asphalted stretch of road, a tribo over 3 miles in length, and would continue running up and down this asphalt as long as the committee desired. While the committee was disappointed in not being able to carry out the reasonable tests which it thought necessary under the circumstances, it felt it to be its duty to see what value the machines might have under the mild test insisted upon by the Winton company. It thereupon yielded against better judgment, proceeded to the asphalted road and started both the Winton and Peerless machines. At the end of 20 or 30 miles the Peerless machine broke down completely and withdrew. At the end of 64 miles the Winton machine stopped, and although the committee demanded that the car continue running, the Winton company declined to allow the machine to go on, thus withdrawing it. It stated the pump was broken.

Before the committee gave out its decision both the Winton and Peerless companies urgently asked for another trial, again stating they would do anything required of them and volunteering to come on to New York. The Christie machine was tried out by Mr. Scott, who was kept waiting some 2 hours before it appeared at the agreed place of trial. The machine developed fair speed and fair staying qualities, but the A. C. A. would be responsible for any accidents happening there as the result of the trials. Owing to the responsibility thus put upon the club by this stipulation, the committee felt it only fair that the contestants themselves should assume all responsibility for accidents and hold the automobile club harmless for any happening as the result of these trials, held at their own importunate solicitations. The contestants were so notified and told that they would have to sign an agreement covering these points; the written agreement was presented to them the day before the race. The Peerless company signed the same

offhand. Mr. Christie had agreed to sign, and Mr. Percy Owen, agent of the Winton company and in charge, refused to sign, stating to the committee he was without authority. He made objection as to the subject matter and form of contract, but he refused to make any suggestions covering the points involved. He simply declined to sign because, he told the committee, he was not authorized. In view of the damage suits, amounting to \$165,000, now pending against the club as a result of accidents in a former speed trial, the committee did not feel warranted in assuming to place any further reliance upon the club, and this time refused to yield to the Winton company, maintaining that its requirements must be complied with before the Winton car could proceed. The committee was unwilling to make one rule for the Peerless and Christie cars and another for the Winton. At the time stated for the trials to begin, the Peerless car was sent on its way. The Winton car, whose owners refused to relieve the club from liability, was forbidden to run, and the Christie car, looked for by the committee, had not arrived. The Peerless company withdrew its car after going a few miles. The committee waited several hours for the Christie car to appear, but it failed to materialize. Thereupon the committee declared the trial at an end.

Although the committee had been instructed to make a fairly severe test, it was extremely anxious that America should be represented in the Gordon Bennett race, and to this end it was willing to stretch a point. The committee is unanimous in the regrettable conviction that not one of the cars on its merits was entitled to represent America, and that were any of them allowed to do so they would be a repetition of the same lamentable failures which have characterized the past. Certainly cars which cannot go for a few score miles at moderate speed over asphalt, without breaking down, which have to be towed to the starting point, or which cannot reach the starting point within several hours of the starting time, are not entitled to be pitted against foreign cars which maintain a speed of over 60 miles an hour over country roads for several hundred miles in succession. The recommendation of the committee was inevitable; any other conclusion would have been a breach of trust.—A. C. Hostwick, Chairman, Racing Committee, Automobile Club of America.

#### OLDFIELD WITH PEERLESS

Cleveland, O., June 21.—Barney Oldfield and the Winton Motor Carriage Co. have again severed connection, and Oldfield has entered the employ of the Peerless Mfg. Co. and will drive its racing cars. It will be remembered that some months ago when Barney and Mr. Winton severed relations the reason assigned was that Mr. Winton had decided to foster the amateur game in the future and let professionalism alone. It was generally understood, however, that the Winton people objected to Oldfield's barn storming campaigns and wanted him to work under their direction, and give exhibitions where they thought it would do the most good for the sport in general. At the time it was announced that Mr. Winton had been accorded a special invitation to enter a car in the James Gordon Bennett American team, Barney was seized with aspirations to become the driver of the Winton car and, as is known, his negotiations with Mr. Winton were successful and all differences patched up, Barney promising to be good and follow instructions. Lately, however, Barney was seized with another attack of "wanderlust" and he concluded he could make more money managing his own affairs. His arrangement with the Peerless company gives him two cars and a man to take care of them and he will race or give exhibitions where he pleases. The outcome of Oldfield's experiments with the Peerless cars will be watched with interest by local enthusiasts, as the machines have never been given a satisfactory trial on the track and much speculation exists concerning them.

## TOUR PLANS COMPLETE

### Arrangements All Along the Line Made and Entries Being Received in Great Number

The committee having in charge the tour to St. Louis is now engaged in settling the many details of the route and accommodations at the various points. In response to letters sent out to the committeemen and others interested in various parts of the country, reports have been received showing that arrangements for placing arrows, distributing confetti, gathering facts for road information, etc., are being made in all parts of the country covered by the tour. As fast as these are received they are tabulated and will become parts of the road book which is to be issued by the association for the benefit of the entrants.

W. D. McNaull, the committeeman at Toledo, O., writes as follows: "We expect to make arrangements for furnishing all supplies needed. We have made the necessary hotel arrangements for the stop at Toledo and also Bryan and the two adjoining towns, so as to take care of the parties between here and South Bend. All these arrangements have been provided for and our committee will have special quarters open at the Boody house to receive the tourists and with a full corps of assistants will direct them to various repair shops and hotels."

L. A. Wood, the committeeman at St. Paul, writes that there will be a large delegation from that city. G. H. Wilson, president of the Louisville Automobile club, says the club will probably institute a run to become a part of the tour. E. P. Moriarity, of Kansas City, states that he and Roy Sanborne have been working on a tour route across the state for some time. The route selected from Kansas City, includes a run of 93 miles on August 6 from Kansas City to Marshall, with a stop for luncheon at Odessa. After spending Sunday in Marshall, the western tourists will go 65 miles on August 8 to Columbia, stopping at Booneville for luncheon. On August 9 the run will be one of 80 miles to Warrenton, with a noon stop at Williamsburg, and on August 10 the tourists will cover 70 miles, stopping for luncheon at St. Charles, reaching St. Louis that evening.

Hurlbut W. Smith, in charge of the Albany-Buffalo division of the tour, returned Friday last from Rochester, where he went in his automobile to inspect the roads. He states that he has located a route whereby the Montezuma marshes, the dread of automobilists passing through central New York, will be avoided completely. Mr. Smith went to Rochester and returned by different routes. The route he has selected for the tour is through Camillus, Elbridge, Weddport, Spring Lake, South Butler, Clyde, Lyons, Newark, Palmyra, and Fairport to Rochester. Mr. Smith's odometer for the run indicated 91 miles, 10 miles more than the distance by railroad. Mr. Smith says he never traveled over roads where more repairing was going on or which were more sightly.

A number of entries have been received during the past week. Most of these were from eastern points and the entrants, in all cases, signified their intention to make the complete run to the exposition city. M. C. Henley, committeeman in charge at Richmond, Ind., writes urging eastern through tourists to pay particular attention to the national highway. He asserts that the road will be the best into St. Louis of all the routes given. He believes that

the hard gravel bed of the highway will make it superior to other routes, particularly if there should be light rains at about the time of the run.

Advices received from Hartford, Conn., Martinburg, W. Va., and Binghamton, N. Y., tell of large parties which are to leave with the tour. Several machines will be entered from Hillboro. Numerous requests for information from other points in the country are received daily, the tenor of which indicates that many enthusiasts are ordering their summer vacations as to become a part of the tour.

Secretary C. H. Gillette of the tour committee has returned from a trip to Syracuse, Utica and other points on the main line route in New York state. He reports great interest in the run in that section of the country, not only among automobilists, but the people generally. All along the line the local road commissions are putting in shape the highway over which the St. Louis tourists will pass.

James H. Sprague, of Norwalk, O., writes that he has begun the work of arranging for luncheon accommodations for the tourists at that point. This is the next stop between Cleveland and Toledo, and Mr. Sprague has gone about the matter in a very thorough manner. Arrangements have been made with the hotels to care for a certain number, and if there should be more than this number to be provided for several associations and church societies will take in hand the work of serving dinners to the tourists.

#### WHITE FIRST TO ENTER

New York, June 19.—To the White Sewing Machine Co. belongs the honor of making the first entries for the American team in the Vanderbilt cup race. Chairman Darrington, of the racing board, says that the formal entry of two White cars was made to him only last week by Paul Deming, the metropolitan representative of the company, who named Hollis H. White and Webb Jay as their drivers. The announcement that the bullion of the cars that have invariably met with success in long distance contests was prepared to prove their speed as well as their endurance was warmly greeted here.

Coupled with the previous announcement that the Electric Vehicle Co. would build a Columbia racer for the contest, encouragement was given that the leading American makers had awakened to the patriotic duty and business advantage of following the Winton and Peerless concerns in their endeavor to have this country creditably represented in international long distance contests.

Colonel Pope will also have a try for the cup. Announcement has been made in his behalf that a 70-horsepower Pope-Toledo flyer has been completed and given a trial on the road at Toledo and that it will be entered for the American team in the great race on Long Island on October 8.

In a straightaway trial on a half-mile stretch of road the other day "Johnny" Fisher, the former cycle crack, who is to be the car's permanent pilot, drove the new flyer in 23½ seconds, a 47-second rate for the mile.

Though Smith & Mahley refuse to make formal announcement of the fact quite yet, it can be stated positively that it is their intention to enter a Simplex for the race.

This brings the positive candidates for the American team already up to nine—One Winton, three Peerless, two Whites, one Columbia, one Christie and one Pope-Toledo.

## THE CLIMB TO THE CLOUDS



NEW YORK, June 19—Senator Morgan, manager for the White Mountain Roads Improvement Association's hill climbing and tours, which are to take place July 11 to 16, announced today the

program and classification of details. The cars will be segregated by weight and by price, with a free-for-all for special machines.

The first five classes have to do with price and are for stock machines. They are: First, runabouts not over \$650; second, \$650 to \$1,000; third, \$1,000 to \$1,800; fourth, \$1,800 to \$3,000; fifth, \$3,000 to \$6,000.

The sixth class is for cars up to 1,000 pounds and the seventh for those from 1,000 to 2,000, the motor or horsepower not being limited in either.

The eighth class is a free-for-all, and the ninth for delivery wagons carrying a load of at least 1,000 pounds.

The tenth and eleventh classes are for motor bicycles up to and over 2 horsepower respectively.

All competing cars must have an extra emergency brake and carry two passengers, each of whom shall be competent to manage and control the car. Only one car will be allowed on the hill at a time, the road being winding and narrow and at places skirting deep precipices.

Gold, silver and bronze medals will be awarded first, second and third place winners in each class. The length of the Mount Washington road from the foot to the summit is 7½ miles. The grade varies from 5 to 20 per cent. The course is winding and its extreme elevation is 6,293 feet. The record for this climb is 1 hour 43 minutes, made last summer by L. J. Phelps in a 20-horsepower Phelps car. Several other cars, including runabouts have also climbed the mountain.

Any manufacturer entering a stock machine must agree in entering to sell his machine if wanted, for cash at the price named in entry; entries for the climb and the 2-day tour which concludes it, will be received by W. J. Morgan, 1 Maiden Lane, New York, and will close July 4.

The beginning of the probably strenuous

season of record breaking climbs of mount Washington began Saturday with a big cut of the previous figures, in which Otto Nestrom and his Stevens-Duryea carried off the honors. The previous record was made to look like the proverbial 30 cents. The flying "Spider" made the run up the 7½ miles in 48 minutes 30 seconds, or within a half a minute of an hour better than the former figures.

Mr. Nestrom had for a passenger A. C. Batchelder, who acted as judge and timekeeper. The start was made from the Glen house at 1:30 o'clock sharp and the finish at the stairway of the Summit house was reached at 2:18:30 p. m. The first 4 miles of the climb was covered in 21 minutes, but from this point on an icy gale was encountered, which compelled the men to crouch low and lowered the time considerably.

Following Mr. Nestrom's attempt, Harry Fodick, of Boston, with Mrs. Fodick and also as passengers, made the ascent in a Winton touring car in 1:40:30, which also beat the former record.

Between now and the date of the meeting there will be many efforts to chop down the figures just made by Nestrom, as to hold the record even for a short time is honor worth having. The weather 3 weeks hence will undoubtedly be somewhat better than it was Saturday and another drop of figures is looked for not only by Nestrom but others as well. The report of the latter's doing has already set several hill-climbers on edge, and some who had not thought of entering the official trials have now decided to send in their names to Senator Morgan.

Yesterday's successful attempt by the Nestrom-Stevens-Duryea outfit was by way of a tryout of the course for the great national hill climbing tournament, which will take place over it July 11-16.

### ALDERMEN HESITATE

Milwaukee, Wis., June 20—Automobile legislation is troubling the Milwaukee common council to no small extent. At present an ordinance to license and number machines owned in this city is pending before the judiciary committee of that body. Despite strenuous efforts of the father of the measure, Alderman Sherburne M. Becker, an automobile owner, it

has remained in the hands of the committee and councilmen claim that it has received practically a death blow.

Alderman Becker seeks the adoption of an ordinance which would require the licensing of all machines and the placing of large enamel numbers on the back part of the bodies—the members of the Milwaukee Automobile Club have registered with the chief of police. Though members of the Milwaukee Automobile Club favor regulation of the sport as a general thing, having adopted, in fact, resolutions condemning scoring, there is considerable opposition even from them.

At the last session of the council committee the opinion of the appellate court at Chicago that the licensing of automobiles is unconstitutional because it is class legislation, was read by Eugene Wuesthoff, refreshing the local club. Members of the council committee have assured the club members that they will not be compelled to submit to any unreasonable legislation. Automobileists claim that what complaint has been made about reckless operation of machines is due to the actions of a few drivers.

The proposed measure is still in the hands of the committee and city attorney and prediction is made that it will remain there for an indefinite period.

The Milwaukee department this week received its first notice of the theft of an automobile. The police have been asked to look out for an employee of Charles H. Herbert, of Evanston, Ill., suspected of having stolen a new red Franklin tonneau car, No. 484. Trace of it was lost at Waukegan.

### ASBURY PARK BY MOTOR

Asbury Park, June 13.—The big many-seated touring car, built by Mack Brothers, of New York, which attracted considerable attention at the Madison Square garden show last winter, as the largest automobile in the world of the touring car type, is being run here this summer as an excursion car by the Motor Car Tally-Ho Co., with encouraging success. The car has a 19-foot wheel base, weighs 2 tons and is fitted with a 40-horsepower gasoline engine. It carries sixteen—three on the driver's seat, three on the next seat, two in individual seats at the side of the inside entrance to the tonneau and eight in the tonneau. It runs on a daily schedule of morning and afternoon trips, ranging from ten to forty miles, embracing the various drives and points of interest in Monmouth county. A Motor Age man had a ride in it yesterday, when it covered a round trip of 10 miles to Long Branch in 35 minutes with fifteen in the car. The fact that it presents the appearance of a touring car and not a brake or bus adds much to its popularity with summer guests seeking an automobile ride.



THE ASBURY PARK PASSENGER SERVICE CAR

## ILL-FATED NON-STOP TRIAL



DETROIT, MICH., June 19.—At exactly 5:40:49% yesterday afternoon a new model L Packard crossed the tape of the Grosse Pointe mile track headed for a thousand-mile non-stop track record. At 11:54:7% the car crossed the tape after completing

the two hundred and twenty-third mile. It was pitch dark and the moon, which had been of sufficient help during the early part of the evening, so that it was possible to drive without headlights, had disappeared, leaving a pitch darkness necessitating the use of headlights. These had been lighted at the time the drivers were changed at 200 miles, but one of them went out in a very little while, and though the drivers were signaled to stop for the purpose of relighting, they continued at almost a 40-mile clip and after crossing the tape on the two hundred and twenty-third mile, the other light went out, leaving them in such total darkness that it was impossible for the driver to locate the turn, with the result that he went through the inner fence about 200 feet from the judges' stand.

The driver at the time of the accident was John Boyd, the mechanic Charles Schmidt. Both were injured by the fragments of fence, and were immediately taken to Grace hospital, where it was ascertained that Mr. Boyd suffered only from a sprained ankle, whereas Mr. Schmidt had, besides cuts on his hands and face, a broken rib.

The object of the run was to prove the qualities of the Packard voiture legere for endurance, economy and speed, by covering a thousand miles without stop, at as nearly the maximum speed of the car as the conditions of track and light would permit. It had been found by experiment on a preliminary run that the motor consumed 1 gallon of gasoline for every 20 miles. Arrangements had therefore been made to supply 5 gallons of fuel for every 100 miles, which would take care of the amount used and keep the supply constant. It had also been calculated how often the oil and water systems would need attention, and arrangements had been made for securing accurate data on these points.

In spite of every precaution taken prior to the start of the car, a spark plug porcelain cracked immediately after the car had crossed the tape. Mr. Schmidt, who was acting as mechanic for Mr. Joy on the first 50 miles, changed the spark plug while the car was in operation. There was an irregularity of times during the first 50 miles as the result of action upon the part of Messrs. Joy and Schmidt to determine exactly what method of driving gave the best speed with the least effort upon the part of the car.

Some trouble was caused after darkness settled in by motor enthusiasts driving to the track with their headlights pointing in the direction of the drivers. The lights from these other cars, even though they were not upon the track itself, were blinding to the man handling the car. There was slow time at every fifth mile, caused by the car being slowed sufficiently to change drivers and sometimes to take on supplies. The two hundred and tenth mile was slow on account of an attempt to light the two

front headlights while the car was moving. It was not found until after several of the men had followed the car almost around the track that there was no water in the generator, and that this prevented the making of gas. Immediately this was rectified, the car was put up to speed again.

The average rate per mile for the whole 223 miles was 1:38%. The fastest miles were the forty-eighth and fiftieth, each driven in 1:25. Sixty-four miles were driven in less than 1:30 and one hundred and eighty-two in less than 1:40, eleven miles occupied over 2 minutes each, for reasons already given. Thus the 223 miles divide into the following score:

Fastest mile .....	1:25
Miles in less than 1:30 .....	64
Miles in 1:30 to 1:40 .....	118
Miles in 1:40 to 2:00 .....	30
Miles over 2:00 .....	11
Slowest mile .....	2:50:1.5
Average per mile .....	1:38:2.5

## CIRCUIT DES ARDENNES NEXT

The next big automobile road race in Europe will be the Belgian Circuit des Ardennes, which is to be run July 25. The distance of the race will be about 600 kilometers—375 miles—which will necessitate four or five laps. The entry for heavy and light cars will be \$200; for voiturettes, \$100; for motor cycles weighing more than 110 pounds, \$20, and only \$10 for lighter ones. The weight of the heavy cars must not be over 2,200 pounds, that of the light cars 1,540 pounds, and of the voiturettes 990 pounds. Up to the first of this month twenty-seven entries had been received in the heavy weight class, nine in the light weight and ten in the motor cycle class. Among the noted drivers entered in the first-class are S. F. Edge, Charles Jarrott, Rigolly, Dursy, Gabriel, Baron du Forest, C. S. Rolis, Baron de Caters, Heath, Baron de Crawshaw, Salieron, Sidney Girling.

## RAILROADS TOO SLOW

Portland, Ore., June 14.—Before the first of July automobiles will be making daily trips over the 60-odd miles of country roads between Shaniko, the present terminus of the Columbia Southern Railroad, and Prineville. B. F. Allen, cashier of the First National Bank of Prineville, said: "We have long waited patiently in anticipation of the extension of the railroad to a point nearer our town, even if the route selected did not bring the track to our thriving city, but now we have decided that our best interest justifies the establishment of an automobile line that will afford rapid transit for passengers, mail and express, perhaps also freight."

## A. L. A. M. IN SESSION

Buffalo, N. Y., June 22.—The Association of Licensed Automobile Manufacturers met at Niagara Falls yesterday for the first day's session of the general annual convention. All of the importers were present and the meeting was harmonious. Nothing of importance was given out, though the discussion at the meeting mainly related to the agency situation.

## BIG MELT AT OSTEND

Nearly \$3,000 in cash and about \$1,000 worth of art prizes will be distributed to the winners of the annual race meet which will be held in Ostend, Belgium, July 14 to 21. The only event which will be run on the first day will be a 5-kilometer competition against time

for tourists. The vehicles will be divided into eight classes according to the value of the chassis. On the second day there will be a 10-kilometer competition against time for professional drivers, using motor cycles, voiturettes, light cars and heavy cars. A road race from Ostend to Blankenberge and return for tourists will be run July 16, while on the next day the mile standing start competition for tourists and professional drivers will be held. Trials for the kilometer standing and flying start records will be made July 20, while a flower contest will end the week of sport July 21.

## ENTERTAINS YE SCRIBE

Springfield, Mass., June 21.—At Cooley's hotel here last night there was a gathering of newspaper men from all over New England, whose heads were full of air-cooled motors, steering wheels, threaded radiating pins, commercial vehicle test awards, and other data that might imply Knox automobiles. For after industriously scoring the highways and byways of New England newspapermen for several days, the Knox Automobile Co. had located most of the scribblers of the "far east," and had brought them together that it might entertain them with an inspection of the Knox factory and manufacturing methods and products, afterward with a tour of Forest park and finally with a banquet of no mean proportions. About a hundred newspaper men were present. The whole affair was enjoyable and well carried out.

## RECENT INCORPORATIONS

St. Louis, Mo.—Westminster Automobile Co., capital stock, \$5,000, of which half has been paid in. Incorporators, William E. Gardiner, A. V. Beyrarn, Jr., James W. Beemis and Henry W. Biedgett.

Ithaca, N. Y.—The Motor & Manufacturing Works Co., capital \$25,000. To manufacture and sell motors. Incorporators and directors, for the first year, David Heid, Ed. A. Gillette, Ithaca; John G. Y. Barkholders, Hamilton, Ont.

Chicago—Western Automobile and Industrial Co., capital \$25,000. To manufacture automobiles and motors. Incorporators, Michael Koeber, John L. Biehl and Michel Heisser.

## NEW TRADE BOOKLETS

The Beckley-Ralston Co., of Chicago, for many years dealer and jobber in bicycle parts and fittings, having entered the field of automobile supplies, has issued a catalogue of such articles, the goods catalogued being principally of well known kind.

To those who are in doubt on the problems of lubrication, the booklet oil versus grease, issued by the Joseph Dixon Crucible Co., of Jersey City, N. J., will prove interesting as its title explains its subject matter exactly.

The Sprague Umbrella Co., of Norwalk, O., has issued a new catalogue of vehicle canopy tops, which are shown in patterns for all kinds of cars from runabout to heavy tonneau.

## TREBERT LOSES

Justice Nash of the New York state supreme court rendered a decision during last week in favor of the Trebert Gas Engine Co., of Rochester, N. Y., in its case against Henry L. Trebert. The action was based upon a contract made by Trebert with Charles H. Marvin and Curtice E. Harrison, of the Trebert Gas Engine Co., whereby Henry L. Trebert was to assign to them his stock in the company and three patents in consideration of \$6,000.



## AFFAIRS OF THE CLUBS

### Plan Many Excursions

—The Cleveland Automobile Club of Cleveland, O., has started somewhat late, but during the balance of the

season it is proposed to be very active in the matter of runs, tours and race meets. The committee in charge of racing matters has come to an agreement with the owners of Glenville track—a matter, by the way, which it has taken some time to thrash out owing to the inclination of the horsemen to demand the long end of the receipts—and the club has applied for a sanction for August 19 and 20. The committee will get to work on entries and will endeavor to make this the largest meet ever held in the central west. The runs and tours committee of the club has published a booklet calling attention to the advantages of club membership and outlining the runs for the season. Next Saturday, June 25, there will be a run to Silver Lake, 90 miles south of Cleveland. Saturday, July 2, will be a tour to Toronto, Canada, by way of Erie and Buffalo, with return by boat or by road as the individual members see fit. Four days will be taken for the run and arrangements have been made for fuel supply and hotel accommodations at the various cities. Non-members as well as members have been invited to participate in this run. Saturday, July 23, there will be a run to Sandy Lake, 25 miles south of Cleveland and Saturday, July 30, a basket picnic at a location to be decided later. Thursday, August 4, will be a big day for the Clevelanders who will participate in the national run to St. Louis. Quite a number of the local drivers have already signified their intention of taking part in this run. Saturday, August 27, 28 and 29 will be a run to Cambridge Springs, N. Y., September 3 and 4 a run to Lodi, and September 10 the Cleveland Automobile Club will entertain the Detroit Automobile Club. September 17 there will be a run to Gates Mills.

**Ate at the Inn**—The Automobile Club of Syracuse held its first club run of the season to South Bay last week. Twenty-two automobiles participated in the run and shortly after 6 o'clock seventy-three persons were landed in front of the Sagamore inn. The automobiles left the city at various times and all were due to arrive at the Sagamore inn at 6 o'clock. A few of the larger cars, the drivers of which were anxious to show their superiority over the others, did not start until late. Proprietor Crowhatch had prepared a special dinner at the inn and the hungry motorists and their guests were in condition to do it ample justice. The rain somewhat delayed the start of the return home and on account of the muddy condition of the roads no fast riding was attempted. The majority of the automobiles arrived at the Yates hotel about 10 o'clock.

**Classed by Cylinders**—The Automobile Club of Bridgeport, Conn., will hold its first race meeting Saturday of this week, at Nutmeg Park. The committee in charge has arranged the following program: Five-mile motor cycle race; 2-mile race for single-cylinder gasoline runabouts; 2-mile race for two-cylinder gasoline cars; 2-mile race for steam vehicles; 5-mile race for touring cars; 5-mile race for all

kinds of cars, also several other minor events will be run. Silver cups will be offered as prizes.

**Planning Parade**—An automobile parade is now being planned by the Brockton Automobile Club of Brockton, Mass.

**Sixty Cars in Line**—The parade arranged by the Automobile Club of Columbus, which was held last Saturday obtained success. There were sixty cars in line and thousands of spectators along the line of march. Only one car was decorated and few ladies were among the passengers.

**Will Discipline Members**—Members of the Automobile Club of Kansas City have decided to help the officers of the law in denouncing and helping to arrest scoffers, who of late have caused a number of accidents, which has brought forth numerous complaints and bad feeling on the part of citizens.

**Weather Interferes**—Captain Anger of the Milwaukee Automobile Club of Milwaukee is arranging for club runs to be made in the near future. So far the runs planned have been failures because of spiteful interference on the part of Jupiter Pluvius. There has been pleasant weather of late, and it is hoped that a third run may be successful.

**Approve Street Improvement**—At a recent meeting of the members of the Springfield Automobile Club of Springfield, Mass., it was unanimously approved that the mayor had decided that wood blocks would be used in paving Main street. At the same time it was decided to ask the supervisors of highways to use only this kind of pavement in that street in future.

**Will Be Good**—A committee consisting of Charles Van Syckel, John S. Broughton, Thomas Throp and John L. Kuser of the Trenton Automobile Club are making a constitution for the club. A clause will be inserted requiring members to comply with the present state and city automobile regulations. It is claimed that most of the members have said they would be good.

**Mayor Interested**—Upon the suggestion of Mayor Phillips, of Davenport, Ia., the motorists of the town have decided to form a club.

A committee consisting of F. B. Carson, F. L. Bills and Orey Jansen was appointed on membership and another committee consisting of W. D. Peterson, F. L. Bills and Al. Ruebsam was appointed to look up the state law and give advice to the city authorities.

**Theater Party**—The Chicago Automobile Club has arranged a club run to Evanston for Saturday of this week. The start will be made from the Michigan avenue club house at 3 o'clock; dinner will be served in Evanston at 5:30; after dinner members will have the privilege of going to Powers theater, where 300 seats have been reserved. "Vivian's Paps" will be the attraction, with a few side features.

**Women Left at Home**—The first stag run of the Buffalo Automobile Club of Buffalo, N. Y., took place last Saturday from Buffalo to Rochester, and was perhaps the most successful of any run undertaken by this organization since its inception. The distance is 72 miles and it was a "go as you please" affair, about twenty-five cars participating in it. A delegation from the Rochester club met the Buffalonians at Scottsville, which is

about 13 miles west of Rochester, and escorted the visitors into the city. It was expected that quite a few of the members of the Syracuse club would join the party, but only Arthur Benjamin and John Wilkinson undertook the trip. After dinner Charlotte was the rendezvous and upon the return to Rochester the visitors were entertained in a very hospitable manner by the local organization. The return to Buffalo was made on Sunday. Both going and returning the weather was all that could be desired. There was, of course, the usual number of petty accidents such as punctures, etc., but with the exception of a road hog coming particularly close to putting D. H. Lewis' Ramlar car into a creek, there were no serious accidents to mar the run.

**New Home Opened**—Formal inauguration yesterday of the Manhattan Bay Yacht Club as the suburban rendezvous of the Automobile Club of America took the shape of a run and luncheon. Though the rendezvous was set for the club house at 11 o'clock, the members for the most part did not meet until after noon at the Long Island City ferry. Thirteen cars took part in the run, which was one of 48 miles to the Hoffman boulevard and through Newtown, Elmhurst, Corona, Flushing, Bayside, Douglasston and Manhattan. There is said to have been a bit of a scrap between two Deauvilles and three Locomobiles in the lead and that one of the Deauvilles got there first, followed by the three Locomobiles, with the rest of the pack, who had been more conscientious as to speed limit observations, following at a considerable interval.

**Parade for July 4**—The election of officers of the San Diego Automobile Club, San Diego, Cal., was held recently with the following result: President, Roy Howard; vice-president, W. J. Wagner; secretary and treasurer, George N. Nolan, Jr.; directors, Captain Humphries, Roy Howard, W. W. Whitson, J. W. Sefton, Jr., George N. Nolan, Jr., and W. J. Wagner. It was decided that the initiation fee would be \$1 and the monthly dues 50 cents. The three officers of the club will cooperate with the committee of the chamber of commerce, which has been making arrangements for the automobile parade to be held July 4.

**Will Aid Tourists**—Members of the automobile clubs of Buffalo and Toronto are trying to bring about an arrangement between the governments of this country and Canada which will tend to facilitate the passage of an automobile from one country into the other. At present the laws in either land require that a fourth of the total value of an automobile must be deposited with the customs officers. It is intended that a special foreign touring certificate and the guarantee of the respective clubs take the place of the present bothersome system.

**Big Run**—The run arranged by the Automobile Club of Philadelphia from Camden to Atlantic City did not turn out as successfully as was expected. Only nine motorists had entered for the run, while four started officially and three on their own hook. Horace A. Beale, Jr., driving a 16-22 horsepower Locomobile arrived first in Atlantic City and thus won the George T. Lippincott cup. His time for the trip was 2 hours 12 minutes. A. J. Clark and Walter D. Harper in a 6 horsepower Stanley steamer were second in 3 hours 1 minute.

# THE READERS' CLEARING HOUSE

## ENGINE EFFICIENCY

Morris, Minn.—Editor *MOTOR AGE*—What is the efficiency of the best type of internal combustion engine; that is, what amount of the theoretical energy of the fuel does it produce? Also, what is the efficiency of the steam engine? What percentage of the energy of the fuel is given off in the incandescent light in a steam plant?—G. W. Gentry.

The most efficient internal combustion engines show by indicator diagrams that the ratio of heat converted into work, to the heat of combustion of fuel used, has a value of 28 per cent. Claims have been made for values as high as 45 per cent. The water jacket will ordinarily carry off 45 per cent and the exhaust 27 per cent of the heat generated. The steam engine has shown an efficiency of 17½ per cent resulting from the influence of separate condensers, high temperature and pressure limit, multiple expansion, increasing the size of units. Recent experiments with steam turbine show the probability of exceeding this figure in large engines. In a lighting plant about 9½ per cent of the fuel energy is turned into light.

## MOTOR POWER

Evansston, Ill.—Editor *MOTOR AGE*—What horsepower should a four-cylinder engine develop at 900 and 1,450 revolutions per minute, respectively, if the bore and stroke were 4½ by 5½ inches and the motor has 85 pounds compression? Should the spark plugs be placed over the inlet or exhaust pipes? What size tires should a motor car have weighing 2,400 pounds with the weight about evenly distributed on the front and back wheels?—H. M. English.

A four-cylinder motor of 4½-inch bore by 5½-inch stroke should develop 28 horsepower at 900 revolutions per minute, and 40 horsepower at 1,450 revolutions per minute. It would be better to place the spark plugs over the inlet valves rather than over the exhaust. Use either 32 by 4-inch, or preferably, 34 by 4½-inch tires if the tires are expected to have severe use.

## SMALL HIGH SPEED MOTOR

Portland, Me.—Editor *MOTOR AGE*—What would be the bore, stroke and compression space be in a four-cylinder four-cycle engine to give 1½ brake horsepower at 2,000 revolutions per minute? What dimensions would be required in a three-cylinder motor to give 1½-horsepower at 2,000 revolutions per minute? Is a three-cylinder motor as well balanced as a four-cylinder vertical motor? In a four-cylinder motor crank shaft why are not the cranks placed on the quarter, or at 90 degrees? In a four-cylinder motor do the two pistons in line fire at the same time or in succession, making an impulse every stroke?—G. B. Low.

A four-cylinder motor of 1½ horsepower would be exceedingly small. Four cylinders 1½ by 1½ inches will develop the power at 2,000 revolutions per minute. It would be better and less expensive to construct a single-cylinder motor. Make the compression space 23 per cent of the piston displacement. A three-cylinder motor 1 9-16 by 1 11-16 inches

will be of the same power. In a motor of that size it is immaterial whether three or four cylinders are used, as the difference in balance will not be appreciable. With the cranks throws at 90 degrees in a four-cylinder motor there would not be an angularly equal division of the torque, which would result in vibration. The customary practice in a four-cylinder motor is to place the cranks in the same plane, with the outer and inner pairs on the same side of the shaft, giving two impulses per revolution, and spaced 180 degrees apart on the crank.

## TWO-CYCLE MOTORS

Editor *MOTOR AGE*—Will you kindly give in the Readers' Clearing House the good and bad points of the two-cycle motor as applied today in automobiles? Is it a reliable engine? Does it use more gasoline? Do the batteries exhaust sooner, and is it in shape today for practical use in a light car?—S. F. M.

The two-cycle motor is in no way experimental and has been made an economical and reliable as the four-cycle motor. Cylinder for cylinder, the two-cycle motor will use double the current of a four-cycle motor because the ignitions take place in one-half the interval. A successful American car uses the two-cycle motor, and an English maker has used this type on a motor-cycle for several years. When made, equipped, and operated properly, there are no inherently bad points in a two-cycle motor.

## GASES AFTER COMBUSTION

Buffalo, N. Y.—Editor *MOTOR AGE*—Is there any great difference in the volume of the gases in an internal combustion engine at the times of entering and leaving the cylinder, and if so what is the difference?—H. L. M.

It seems rather a peculiar statement that the volume of the gases in an engine is less upon leaving than upon entering the cylinder, under certain conditions. Nevertheless, this is the case. Assuming that gasoline consists chiefly of pentane, and the mixture is perfect, the change is as follows:

BEFORE COMBUSTION		Pentane	Air
Formula	.....	C <sub>5</sub> H <sub>12</sub>	80 + 32N
Volume	.....	2	16 64
Total	.....		82

AFTER COMBUSTION		Nitrogen	Carbonic Acid	Water
Formula	.....	32N	5CO <sub>2</sub>	6H <sub>2</sub> O
Volume	.....	64	10	very slight.
Total	.....			74

There is therefore a 10-per cent reduction in volume and the perfect engine would receive and deliver the charge at practically the same pressure and temperature.

## SUGGESTIONS FOR MOTORISTS

Cleveland, O.—Editor *MOTOR AGE*—Below are a few things learned from experience, which may be of use to other readers of the Clearing House:

Often the water circulation system becomes clogged from the use of impure and dirty water. A simple remedy is to fill the tank with

a strong soda water solution. After five minutes running of the motor, drain and rinse with clean water.

Dirty chains should be well washed in kerosene, dried, and immersed in a bath of tallow, which is kept just at the melting point. In an hour remove and allow the excess tallow to drip off.

Slipping clutches can be remedied by the use of cotton oil, which should be applied liberally. It will be found superior to castor oil for this purpose.

Where two sets of storage batteries are used on a car, it is advisable to give the spare set some use each day, otherwise sulphating will result. Storage cells should be charged once a week to keep them in the best of condition, attention being given to see that they have been partially discharged during this period.

Once in 2 or 3 days, after completing a run, inject a little kerosene into each cylinder and turn the motor over 10 or 12 times. This will remove the gummy oil and carbon that has collected in the valves and piston rings. The results of this slight attention will be surprising.

In replacing a bearing cap never put one nut home and then the other. Tighten them gradually, operating on each successively, so that practically the same tension is on all during the process. Also remember that the entire motor expands while running, so it is not necessary to use a 14-inch wrench on an inlet valve nut.—H. B. A.

## REGULATOR ON STEAMER

Milwaukee, Wis.—Editor *MOTOR AGE*—Will you kindly inform me through the Readers' Clearing House what influence has a gasoline regulator of a steam machine on the amount of gasoline consumed in a given time of distance, presuming that the boiler is a free and easy steamer? Would it pay me to put one on, the machine being without a regulator now? Which is the most economical, to unke steam as it is used or hold it at say 200 pounds, running the machine at an average speed of 12 miles an hour? Does either way tend to economize in gasoline and water or will the machine use as much one way as the other?—J. K. L.

The automatic regulator will save considerable bother by maintaining practically a constant steam pressure up to the capacity of the boiler. Upon stopping, the main burner would shut off automatically and start from the pilot light as soon as the pressure goes down to the point at which the regulator is set. It would be more economical to maintain the 200-pound pressure than to make the steam as used. It should at least be possible to run 10 miles on a gallon of gasoline. *MOTOR AGE* advises the use of the regulator and also of a feed water heater if there is not one attached.

## ROTARY GAS ENGINE

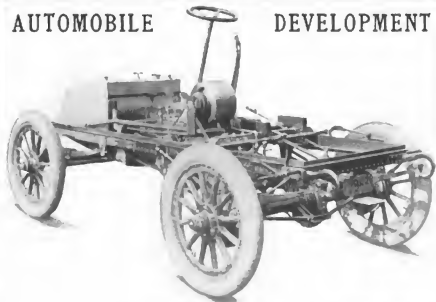
Winfield, Kan.—Editor *MOTOR AGE*—Will you state in the columns of *MOTOR AGE* what power a circular fan 10 inches in diameter and with blades 3½ inches wide would give, if the same amount of gas mixture used in a 3½ by 4-inch motor cylinder should be exploded through a 1½-inch hole against the fan, the fan being enclosed in a case, and having a 20-pound balance wheel on its shaft?—J. S. S.

It is impossible to state even approximately the power that would be developed. There would not be sufficient power to be of any service. The reaction explosive motor has been exploited considerably without developing anything of consequence.



# AUTOMOBILE

# DEVELOPMENT



ROCKAWAY SPRING MOTOR STARTER ATTACHED TO A CAR

## WHIPPLE'S HEAVY ROAD CAR

Harlan W. Whipple, of New York, president of the American Automobile Association, is the possessor of the specially built road giant shown on dishabile in the accompanying illustration. It is a 3,000-pound, four-cylinder car built to order at the Scott Iron Works of Baltimore, Md., and while in its present shape it is rather more impressive than pretty, it is planned to fit it with a side entrance tonneau body of gorgeous design and big enough to seat half of the population of Greater New York. In the meantime it may be driven in races.

The wheel base is 126 inches and the front and rear wheels are 36 and 38 inches in diameter respectively. The pressed steel frame is 14 feet 9 inches long. The wheels are fitted with Michelin tires, 4-inch in front and 5-inch in the rear. The motor is of 6-inch bore and stroke and is rated at 80 horsepower. The cylinders are cast individually. The sliding gear transmission furnishes four forward speeds and a reverse drive. Conventional lines of big-car construction have been followed in its design. R. B. Wasson is the designer.

## AUTOMATIC STARTER

The Rockaway Automobile Co., of Rockaway, N. J., in addition to its ignition and other electrical sundries for the automobile trade, has introduced two distinct styles of automatic starters for gasoline automobile motors, one being an electric and the other a spring or mechanical device.

The electric starter consists of a small enclosed electric dynamo-motor, and a small storage battery with automatic devices by means of which the dynamo keeps the battery fully charged while the engine is running, thus providing source of energy by means of which the dynamo acts as a motor to start the engine. This system also provides current to operate electric lights and ignition apparatus.

The dynamo runs only a small part of the time, except at night when the lamps are used, and then requires only a small amount of power, for as soon as the batteries have acquired their full charge an automatic clutch releases the dynamo from engagement. This same auto-

matic means comes into play to connect the dynamo into circuit to recharge the batteries when required, as would be the case after they were used to start the engine several times in close succession. The batteries, however, have a capacity to start the engine twenty-five or more times without recharging. A governor also is provided on the dynamo, which will allow the automatic clutch to engage only when the engine has acquired a speed of 150 or more revolutions per minute.

The only fixed requirement for attaching the starter is that sufficient room be provided on the engine shaft for a driving sprocket at a point where it is in line with the dynamo-motor. The starter is equipped complete with automatic governors, clutches and a six-tooth, 1-inch pitch, 3/16-inch face sprocket for use with a block chain. The sprocket on the engine shaft should be of such a size that the ratio of reduction will give a speed of 2,400 revolutions of the dynamo-motor per minute when the engine is running one-third of its rated maximum speed; this to insure sufficient range of operation to meet all emergencies. The automatic

clutch is so arranged that any excess of engine speed above this does not accelerate the dynamo beyond its normal speed.

The battery can be located at any place on the car desired, so long as it is not allowed to become too hot by proximity to the radiator, exhaust pipe, muffler, etc. The only connection required between it and the dynamo-motor is purely electrical, hence it is not necessary to be in mechanical alignment with any other part of the apparatus.

The spring starter is explained by its name. It is thrown into operation by a small foot pedal, and after starting the engine, is automatically rewound by the engine as soon as the latter has acquired a sufficient and predetermined speed, and when it is fully wound up is automatically disengaged. This rewinding and releasing is accomplished in a few seconds. This operation is automatic. After the starter is wound up and automatically disengaged, it may stand for any length of time, being ready at any moment to be thrown into operation for the purpose of starting the motor. This spring starter is made in two sizes, for large and small cars, respectively. In the accompanying illustration the larger size is shown attached to the chassis of a Winton touring car.

## ACETYLENE LAMP BURNERS

The American Lava Co., of Chattanooga, Tenn., have for several years specialized in the manufacture of burner tips for acetylene lamps, having introduced such tips in the bicycle industry at the time the acetylene bicycle lamp became popular. It has naturally developed its line to include burners for automobile lamps and headlights and now offers a line of several styles of burners, all having the peculiar feature of a slot under the gas vents in the hoods, these slots being claimed to increase the effectiveness of the flame by virtue of creating a superior mixture of gas and air.

It is said that the burners do not carbonize and that they cannot twist out of alignment. Danger of working loose of the head in the burner barrel is lessened by making both parts on a taper fit so that they may be forced together under pressure. The slotted hood renders cleaning easily accomplished as well as tending to prevent clogging. All patterns are furnished from stock in 1/4, 1/2, 3/4 and 1-foot sizes.



HARLAN W. WHIPPLE ON HIS BIG TOURIST-RACER



ESTABLISHMENT OF THE AUTOMOBILE GARAGE & REPAIR CO. OF CLEVELAND, O.

## GOSSIP OF THE GARAGES

Winton, have just sold two Winton touring cars of 24 horsepower to the government for the use of the signal corps. The body of one of the cars is to be practically rebuilt. It will be made capable of carrying six passengers, together with a full set of telegraph instruments and tools necessary in repairing the telegraph wires of the government.

**Has Official Supply House**—Charles E. Miller, dealer in automobile parts and sundries at 97 Reade street, New York, with branches at Boston and Philadelphia, has been appointed officially by a notification to the members by the secretary a supply house for members of the Automobile Club of America, who will receive a discount on all articles purchased.

**First Out**—The first of the new Orient Luchman surreys to reach New York was received by E. J. Willis, the metropolitan representative of the Waltham Mfg. Co., last week. The new car has two seats, a 5 horsepower motor and side lever steer. Heavier springs have been added and the frame has been trussed to carry the increased weight. The price of the new vehicle is \$460.

**Abandoned One Place**—John Wanamaker is to abandon his New York garage and sales headquarters on East Fifty-seventh street. The Automobile Exchange and Storage Co., 133-139 West Thirty-eighth street, has been appointed a sub-agent, with M. Augustus Eaders, Jr., as manager. The Ford and Premier cars, however, will also be sold by John Wanamaker from his main Broadway store.

**Mitchells in New York**—The Duerr-Ward Co. received last week the first of the Mitchell runabouts to reach New York. It aroused favorable comment by metropolitan critics. It has two individual seats, a double cylinder vertical 7 horsepower engine under a bonnet, wheel steer, sliding gear transmission with three speeds ahead and reverse. It is finished in black with red stripes, and has a yellow running gear.

**Good Time for Michelin**—A. Michelin, head of the Michelin house in Paris, manufacturer of the Michelin tire, will shortly visit America with his brother and visit the world's fair at St. Louis. Extensive preparations have been made for a reception with a dinner at the Waldorf-Astoria and a special train from New York to St. Louis under the supervision of Norris X. Mason, president of the United States agency of the Michelin Tire Co.

**Detroiters Go to Coast**—G. O. Heine, of the Heine Piano Co., of San Francisco, Cal., has secured the local agency for the Slutz car, made by the Sintz Automobile Co., of Detroit, Mich., also of the Quern, made by H. H. Bloomstrom & Co., of the same city. Mr. Heine expects to start an automobile factory in Cincinnati, O., in the near future. The plans and models of the cars will be made by Victor Emerson, whom, it is claimed, built one of the fastest boat engines in the world.

**Utica in the Game**—The automobile has captured Utica, N. Y., and cars in the streets are numerous. Deliveries on cars this year have been slow, but the Miller-Mundy Motor Car Co. protected itself by securing guaranteed deliveries in December, consequently is in a position to give prompt deliveries. One of the

firm has just returned from Detroit, where he secured another shipment of Cadillacs, the deliveries to start at once. Five carloads of Pierce cars were recently received, and with the Winton, Orient buckboards and Waverley, the line is almost complete.

**Everything Needed**—One of the finest garages in the country has just been opened by the Automobile Garage & Repair Co., of Cleveland, O., immediately adjoining the retail establishment of the Winton Motor Carriage Co. The company was formed some months ago acting as agent for the Packard, Autocar and Waverley lines, and it occupied a commodious establishment on Erie street. It was soon found, however, that the store was not large enough and after thoroughly canvassing the situation the company decided to lease the building mentioned, a handsome four-story brick measuring 70 by 133 feet. The building was well designed for the requirements, having been built by a large carriage concern for the repository and manufacturing establishment. There is an alley at the side and rear, affording entrance. The first floor has been partitioned off into several rooms, including a general office, ladies' reception room, private offices, stenographer's room, and a cleaning and light repair room in the rear; the balance of the floor, 50 by 110 feet, being devoted to storage. The wash racks in the rear have cement floor with drain, and accommodate three rigs at a time. A feature is the fact that there are numerous clusters of overhead incandescents, as well as rows of side lights, affording ample illumination, so that all parts of the car can be examined. Around one side of the repair rooms are rows of lockers, which are rented to customers at 50 cents per month. There are two well lighted pits provided with jacks for lifting cars. On a platform are two large gasoline tanks provided with the automatic measuring and regulating attachments. These may be set for the amount of gasoline required and the flow is automatically operated and regulated for that amount. There is a charging plant capable of charging twenty-four cars at a time. A large electric elevator extends to all floors and the basement. The latter is partitioned off into rooms, embracing a tire storage room where tires may be kept cool and in a dark place; a battery testing and repairing department; a battery stock room; an oil room supplied with tanks of various kinds of lubricating oil and having the same automatic regulating and measuring attachments as the gasoline tanks above; and a large room for storage. The second floor contains the bookkeeper's office, the general sales room and the stock room, located in the rear. In addition to repair parts of all kinds, the company carries an extensive line of sundries and specialties, being Ohio agent for the line of Emil Grossman, of New York. The third floor is devoted to the repair work and is equipped with all the tools and appliances required for this work. The fourth floor is to be fitted up as a manufacturing establishment and the company will shortly purchase a line of machinery, it being the intention to manufacture a number of automobile specialties for the trade. The management of the business is in the hands of Joseph M. Belin, who was formerly with the Cleveland Automobile & Supply Co., and who gained his experience with several of the largest factories in France and was later associated with a leading New York garage.

**In the Same Olds Way**—The Pioneer Automobile Co., of San Francisco, Cal., reports that five carloads of Oldsmobile have been shipped to it.

**Repairing and Renting**—The Central Automobile Co., of Newark, N. J., has decided to open a branch office at Emory street and Second avenue. The place will be fitted as a repair and renting shop.

**Race Results**—E. D. Gallaher, of the Richard-Brasier agency, says that within 24 hours from the announcement of the result of the Gordon Bennett race he received orders for \$38,000 worth of the Richard-Brasier cars.

**Toledo in Demand**—Pope-Toledo cars of the four-cylinder type are being sold in Washington as fast as they can be received from the factory. Manager Hough, of the Washington branch of the Pope Mfg. Co., sold one of these cars last week to a Baltimore merchant.

**Has Four New Suits**—Attachment suits for debt have been filed against the District of Columbia Automobile Co. by the following companies of Washington, D. C.: National Electric Supply Co., \$286.19; C. & P. Telephone Co., \$156.82; J. L. Loose, \$230; L. H. Stabler, \$79.20.

**Popular With Quakers**—E. T. Rose, the recently appointed Haynes-Apperson agent in Philadelphia, has made such a hit with them that he has taken another larger garage at 262 North River street in the center of town. He has incorporated his business under the title of the Rose Automobile Co.

**Lozier Automobiles Promised**—H. A. Lozier, of the Lozier Motor Co., of New York, which has hitherto devoted its attention to building power boats and engines for them, says that next year his company will enter the automobile field on a large scale but will give no particulars as to price and style.

**Repairers Make Money**—Sales were rather few during the last week in Newark, N. J., on account of exceedingly bad weather, which, however, did not prevent many motorists from using their cars. Local repairs were kept pretty busy, as many minor accidents happened on the muddy and slippery roads.

**Side Entrance Tonnage**—The Worthington Automobile Co., of New York, is showing drawings of the side entrance tonneau bodies with which the Berg cars are soon to be fitted. The company expects this week the first of the Meteors, which are being built at Cleveland, and next week the first of the imported Bollee cars to arrive.

**Government Buys Winton**—Cook & Owens, the energetic Washington agents for the



ROCKFORD COLLEGE GIRLS GIVEN AN AUTOMOBILE OUTING

**Hot Time**—Plans are being made for holding an automobile carnival in Chattanooga, Tenn., July 4.

**Hill Climb at Spa**—The annual hill climbing events arranged by the Automobile Club of Spa, Belgium, will be held July 25.

**Up to Date**—John H. Ward, a milk dealer in Chester, Pa., recently purchased an automobile, and now delivers the "goods" with the motor car.

**Small Proportion**—Out of 160 drivers' licenses issued by the mercantile appraiser, John Parsons, of Atlantic City, N. J., only eight were for automobile operators.

**Somebody Slow**—It is claimed that not more than 5,000 owners of automobiles have as yet received their licenses according to the new automobile law of the state of New York.

**Doubled**—There are about twenty-five motor cars owned by automobilists of Butte, Mont. Last year about the same time of the year there were only about a dozen cars in town.

**Parade for Oshkosh**—An automobile parade is being arranged in Oshkosh, Wis., for July 4. Up to the present nearly thirty owners of cars have advised the committee on arrangements that they would be in line.

**Saved His Beer Money**—Joseph Uhllein, of Milwaukee, Wis., the millionaire president of the Schlitz Brewing Co., has been added to the list of Milwaukee automobile owners, having purchased a Peerless.

**Canada Doing Well**—According to official figures there were issued 289 licenses for automobiles thus far this year in the province of Ontario, Canada. This is an increase of 149 over the total number of permits issued last year.

**Street Cleaning Automobiles**—According to Street Cleaner Woodbury of Baltimore, Md., there are several automobile manufacturers at work upon a practical street cleaning automobile. One is nearly finished which will have a tank capable of holding from 6 to 8 cubic yards of refuse.

**Helps Some**—J. W. Ivory of Dillsburg, Pa., is the promoter of an automobile line between his town and Dover, passing by Wellsville and Fossilville. The round trip will be made in a little over 12 hours, while with the present railway system it takes nearly all day, besides costing \$1.00, whereas the auto-

mobile trip will only cost \$1.05. If the venture proves successful, lines will be made to many other important localities in the vicinity.

**At County Fairs, Too**—Automobile races and speed exhibitions are slated for July 4 at the Butler county fair grounds, Hamilton, O. Ben Strauss, W. F. Whitaker, O. M. Bink and C. E. Neup have charge of the arrangements.

**Charity Work**—A dozen motorists of Kalamazoo, Mich., took people out for rides a few days ago for a small charge, the proceeds of which were for the ladies' auxiliary of the Kalamazoo hospital. All told \$61.80 was thus taken in.

**Yes, Indeed**—According to recent local reports there are twenty-one automobiles owned by motorists of Lancaster, O., which it is claimed make the town one of the greatest automobile centers in Ohio, in proportion to its population.

**Light Cars Best**—Only three of the thirteen cars which took part in the recent Glasgow to London reliability trial were awarded gold medals. They are a 6-horsepower light Wolseley, a 10-horsepower Argyle and a 20-horsepower Thornycroft.

**High Costs**—Carl Fisher, the Indianapolis automobilist of Mohawk fame, was arrested the other day for driving too fast in the streets of Noblesville, Ind. The fine imposed was only \$1, but after the other little charges were added the amount reached \$10.65.

**That Rotary Again**—C. R. Twitshell, superintendent of the Brown-Winstanley Mfg. Co., of Los Angeles, Cal., is the most recent inventor of a rotary internal combustion motor. It is said that the motor is a novelty in principle and that it is now being tried as the propelling means of a small runabout.

**Good Showing**—Referee in Bankruptcy Hildebricks, of Buffalo, N. Y., declared a first dividend of 5 per cent last week, in the case of the Conrad Motor Carriage Co. Since Trustee Hays took charge of the business \$40,608.99 has been taken in and \$29,806.18 disbursed, thus leaving a balance of \$10,172.81.

**Hoodlums in Beerville**—Milwaukee seems to have the ambition of becoming as pre-eminent as New York in the way of attacks upon automobilists, says a local paper. A few days ago a party of motorists were returning from an outing when they were attacked by twenty men and boys who threw stones, empty bot-

tles and other missiles. One of the motorists drew a revolver, which had the desired effect. Local dealers and private owners have decided to unite to protect themselves and will make an appeal to the chief of police for concerted action.

**Bright Idea**—In order to make better friends between the horses and automobiles in Muncie, Ind., Captain Jesse A. Stephens of the Fire Belt Auto Club has suggested that on a certain afternoon each month the owners of horses bring them into a certain street so they might be exercised in company with motor cars.

**More Topics**—J. Dunbar Wright, a globe-trotter and camera fiend, whose annual lectures at the A. C. A. on his travels have given him widespread fame among automobilists, returned to New York last week from a trip around the world, Egypt, Ceylon, Japan and China being the main points of extended sojourn.

**Escorted Out of Town**—Dr. A. R. Bond and H. R. Cramer left Fort Worth, Tex., last week in an automobile, going to the fair in St. Louis, Mo. A great many automobiles from the town and surrounding country accompanied them many miles outside of the city limits and the matter was considered quite an important event.

**Feeders for Trains**—The board of trade of Monticello, N. Y., has decided to put on automobile stings to meet Erie trains arriving in Middletown. The steeple was taken because the railway company refused to give the people of Monticello a satisfactory train schedule. Twenty-six thousand dollars has already been subscribed for the enterprise.

**By Way of Milwaukee**—E. V. Warner, J. E. Sammonson, P. C. Allen and two Indy companions passed through Milwaukee, Wis., last week on their way to St. Louis, Mo. The party started from New York a week ago and has been making the journey at an average run of 250 miles a day, and reported that the roads had been good thus far.

**Honors Divided**—Michelin and Continental tires divided honors in the James Gordon Bennett international cup race last week. The winning Richard-Brasier car was equipped with Michels, while Jenatry and d'Aters, second and third, both drove Mercedes cars fitted with Continentals. Altogether there were four cars with Continentals among the first six finishers.

**Honeymoon in a Car**—C. A. F. Phizzenmayer, who recently made a Boston-New York run in a Locomobile gasoline touring car, was married at New Haven, Conn., last week. Following the wedding he started with his bride and record-breaking car, the latter decked with white ribbons by Perry Owee, one of the groomsmen, on a honeymoon journey to Portland, Me., and return.

**The End Near**—The plant of the Century Motor Vehicle Co., Syracuse, N. Y., was sold by Trustee in Bankruptcy Stone last week for \$10,788.49 to David H. Salmon of the Dunn Salmon Shoe Co. of Syracuse. Mr. Salmon held a \$10,000 mortgage on the property. The equipment and stock were sold several weeks ago and the sale of the real estate disposes of about all the assets of the bankrupt automobile company. The final meeting of the creditors will be held some time next month.

**Mules Come High**—Fulton R. Gordon, one of the best known automobilists in Washington, D. C., has had suit entered against him by J. P. West, a Norfolk county, Va., farmer, for the loss of a mule valued at \$200. Mr. Gordon and Benjamin Robbins, of New York, had been touring in Norfolk county in a Toledo car, when they passed West's mule, which ran away and smashed things generally.

**Sells Pressed Steel Frames**—Thomas E. Deekert has severed his connection with the Parish & Bingham Co., of Cleveland, O., and is now representing the Case Mfg. Co., of Columbus, O., which manufactures automobile axles, and the Cleveland Car Specialty Co., of Cleveland, O., which makes pressed steel motor car frames. Mr. Deekert is well known in the trade and his new connection should prove an advantageous one.

**Elected Officers**—The stockholders of the Buckmobile Co., of Utica, N. Y., at a meeting on June 7 elected three directors for the ensuing year as follows: A. G. Brower, A. V. Brower and Samuel Campbell. There are two vacancies in the board, which were not filled. At a subsequent meeting of the directors A. G. Brower was elected president, Samuel Campbell vice president and A. V. Brower secretary and general manager.

**Hustling**—Frank Hall, of the Syracuse Chilled Plow Co., made a record run to Portland Sunday on his motor cycle, which for time automobilists have not equaled and are not likely to equal. Mr. Hall left Syracuse at 10 o'clock in the morning and reached Syracuse by way of the Onondaga Indian reservation, Tully and Homer at noon. Leaving Cortland at 12:15 he reached Syracuse at 2 o'clock, his cyclometer registering 82 miles.

**Italians Import From France**—In a recent bulletin of the French club of trade of Milan, Italy, it is reported that there are only 1,750 automobiles in use in Italy. The majority of the cars are of foreign origin, some of them very old. While the Italian industry is making progress there are only a few well known concerns. In 1900 there were imported 146 cars from France; 247 were imported in 1901, while in 1902 the number amounted to 252.

**Making New Jack**—The Pearson Mfg. Co., 345 and 347 West Fayette street, Syracuse, N. Y., recently incorporated, has begun the manufacture of patented carriage, wagon and automobile jacks, the latter made after a pattern designed to please automobilists particularly. It is provided with a folding handle and can be packed under any automobile seat by reason of its miniature size when folded. The automobile jack is made entirely of metal. The folding handle enables it to be packed in small space. It is provided with a leather guard for the step, to prevent marring the paint.

**A de Dion Excursion**—The de Dion-Bouton concern of France has organized an excursion for motorists using its cars. The party will leave France July 12, crossing the channel by boat and going to Dover. After the machines will have been landed there will be a run to Sir David Salomon's summer residence in Maidstone, where the motorists will be entertained at tea. The same evening the Frenchmen will start for Tonbridge, where they will remain over night. On the following morning the trip will be resumed with a run to Portsmouth, where the party will stop a day,

enabling those who wish to visit the sights of the Isle of Wight. Excursions to many other localities in southern England will be made until July 23, when the motorists will go to London, where they will remain 48 hours. It is expected that about 500 miles will be traveled, and that at least 150 automobilists will join the excursion, which will cost \$130 per person.

**Fast Going**—Fifty miles in 1 hour 11 minutes 30 seconds on the road on a 13, horsepower motor cycle is the result of the annual motor bicycle road race organized by the Buffalo Motorcycle Club. There were only thirteen starters, but the race was interesting and attracted many spectators along the course, which was from Limestone Hill to Corlew and return. The winner was A. S. Noonan, of Rome, N. Y., who rode an Indian machine. A. Becker, of Buffalo, on a Thomas was third in 1:14:30, while third, fourth and fifth places were secured by drivers of Thomas motor cycles.

**Another Case**—Another instance of the advantage of the automobile over other transportation systems was shown a few days ago when several doctors from Columbus, O., had to make a hurried trip to Robstown, in Pickaway county, to perform an operation for appendicitis upon a woman. Dr. Charles S. Hamilton, who was one of the party of three doctors, had to perform an operation in Columbus before leaving for Robstown, and sent a nurse and everything necessary for the operation ahead, also in an automobile. The doctor left Columbus at 1:30 in the afternoon and was back in the city at 7 o'clock.

**French Tradesmen Elect**—At the annual meeting of the board of trade of the automobile and allied industries, which was held in Paris June 6, Marquis de Dion was elected honor president and M. F. Max Richard, president. E. Mors and A. Peugeot were named vice-presidents, while M. G. Gohron was chosen treasurer. Marquis de Dion, who was the former president, made an interesting speech concerning the condition of the trade and what the organization has done. Speaking of the membership he stated that while there were only forty members in 1900, there are 177 at present, with about thirty names on the list to be passed upon.

**Get Gold Medals**—The following concerns were awarded first prizes at the international automobile and alcohol show of Vienna, Austria: Neue Automobilgesellschaft, Berlin; Scheibler Automobil Industrie, Aachen, Germany; Fabbrica Italiana di Automobili, Torino, Italy; Daimler Österreichische Motoren Gesellschaft, Vienna, Austria; Bock and Holzer, Vienna; Jacob Lohner & Co., Vienna; Laurin & Klement, Jungbunzlau, Austria; Johann Puch, Vienna; Arnold Spitz, Vienna; Darracq & Co., Suresnes, France; de Dion-Bouton & Co., Putenay, France; C. G. & V. Putenay, France; Societe Nouvelle des Etablissements Icanville, Paris; Gardner-Serpoll, Paris; Societe Anonyme d'Electricite et d'Automobiles Mors, Paris; Les Fils de Peugeot Freres, Valenciennes, France; Buhard-Lavassor, Paris; Renault Freres, Billancourt, France; Veau & Languemare, Paris; Edouard Surlout & Co., Billancourt, France; Chasche et Cie, Paris; Touring Club of France; Automobile Club of France; l'Auto, Paris. The agents in Vienna of the Michelin Tire Co., of the Richard-Brasier, and of the Peugeot cars were also awarded similar prizes.

**Happier Than Ever**—E. R. Thomas, president of the E. R. Thomas Motor Co., of Buffalo, N. Y., called on Motor Age last week, and said that the trade was in excellent condition all over the country. Mr. Thomas is always one of the happiest men in the trade, and this season he is more than feeling satisfied, on account of the rapid jump into a wider popularity made by the Thomas product this year, when it came out in the form of a three-cylinder touring car. While in Chicago Mr. Thomas visited the Chicago representative, C. A. Coey, and the latter placed an order for a 60-horsepower, six-cylinder, side-louver limousine car, one of the new models now coming through the Thomas factory.

**With the Comforts of Home**—Francis T. F. Lovejoy, a millionaire of Pittsburgh, Pa., held a reception last Saturday on account of the inauguration of what is called his "automobile palace." The building, which is two stories high and has a large basement, is exclusively used for keeping the eleven automobiles which the Pittsburgh motorist owns. The center room on the first floor is used as the repository for the cars, which include a 35-horsepower opera bus for eight passengers, a bus seating six passengers, three large touring cars, three smaller ones and three stanhopes. The floor of this room is of stained wood, the wainscoting of tile brick and the walls and ceiling of white enamel. To the right is the charging plant, machine shop and wash room and to the left a large room into which the machines are brought when they are to be used. The building is of gray brick and terra cotta and has a roof of Roman tile. It is 172 feet long and 88 feet wide. A large gymnasium, a billiard room, an office and other special rooms are in the structure.

**Automobile Co-Eds**—Probably for the first time in western Illinois have the inmates of a college been invited to enjoy an automobile ride. Nearly eighty students of the College for Girls at Rockford, Ill., were given this treat a few days ago and it is yet being talked about in town. Such a happy bunch of girls as were these collegians when they were seated in the twenty-five cars which owners of the town had cheerfully placed at their disposal for the occasion is not found daily. But while there was pleasure in plenty for the girls some townspeople complained that the party drove too fast, at least faster than the speed permitted by the automobile ordinance. Almost a score of motorists known as having been in the party were summoned to appear before Judge Morrison in the police court to answer to the charge of having broken the city ordinance. Only a few of the offenders were in court when Mayor Jackson made the following remarks: "It puts the mayor and the city administration in a peculiar position when people complain, as in a case like this. We are responsible for the enforcement of the ordinances and it is our duty to see that the automobile owners do what is right. They have been warned time and again, several have been brought before Judge Morrison and have been let off with lectures, but it has come to the point where something must be done. This is to be a final warning and from now on there will be no discrimination." The complaints were not entirely unjustified; there was some rather daring driving, and in one instance a big car came within a few inches of running into a fire engine.

# *The* PIERCE-RACINE

## A Runabout and Light Touring Car

ITS MOTOR IS THE HEART AND LIFE OF AN AUTOMOBILE. WITHOUT A POWERFUL AND RELIABLE MOTOR, THE CAR WILL PROVE UNSATISFACTORY AND OF NO SERVICE



### \$750

AS A RUNABOUT

19 Years

Making Gas and Gasoline Engines

OUR 8,000 MOTORS, AGGREGATING 50,000  
H. P., DOING BUSINESS ALL OVER THE  
WORLD. SEND FOR BOOKLET.

### \$850

WITH TOPNEAU

Facts are our Endorsements

WE MANUFACTURE A STRICTLY HIGH GRADE, UP-TO-  
DATE AND RELIABLE CAR, THOROUGHLY  
COVERED BY OUR GUARANTEE.

8 h. p., mechanically operated valves; transmission, three speeds  
forward and reverse; capacity, 160 miles without recharging

## PIERCE ENGINE CO.

WILSON MOTOR CO., Chicago Agts.  
1002 Michigan Avenue

Box 175, RACINE, WIS.

# MOTOR AGE

VOL. V. NO. 26

CHICAGO, JUNE 30, 1904

\$2.00 Per Year

## THE WHITE MOUNTAIN TOURNAMENT

**N**EW YORK, June 25—That the owners of sturdy cars are taking great interest in the coming national hill-climbing tournament on Mount Washington, July 11-16, is evidenced by the entries of noted cars and drivers already received, which include

White Mountains Roads Improvement Association of a handsome silver trophy to be given the contestant, irrespective of class, making the fastest climb. It will be known as the "Climb to the Clouds" trophy.

Without doubt the preliminary trials last

event. With these early birds as aides, the promoters are boasting the contest in every way and it is not unlikely that it will draw a large body of motorists to the mountains as witnesses of the scramble for the prizes offered contestants.



NESTMAN ITALY WAY UP MOUNT WASHINGTON



IN THE GATE OF CRAWFORD NOTCH

Harry S. Harkness, Mercedes; Harlan W. Whipple, Mercedes; Nathaniel Huggins, Decauville; Otto Nestman, Stevens-Duryon; L. I. Phelps, Phelps; H. L. Rowden, Mercedes, and P. M. Stanley, Stanley. It is also expected that there will be a large entry of runabouts and light touring cars on account of recent excellent climbs of such cars.

That the trade, too, is taking a lively interest in the contest is evidenced by the gift of the

week when, on the occasion of an inspection trip, Otto Nestman in a Stevens-Duryon and Harry Foadick in a Winton both shattered the previous record for the climb, Nestman by an hour, have done much to awaken a great interest in the coming club.

This preliminary work drew a fair-sized party into the White Mountains and imbued them with the natural fitness of the place as a seat for a composite pleasure and competitive

As the views on this page suggest, the scenery of the district is such that the trip to Mount Washington at the time of the climb is bound to be enjoyable. The efficiency of the test from a commercial standpoint is equally apparent. Climbing a 7½-mile, winding incline reaching a gradient of 20 per cent is no sinecure. It is a real test of a car's hill-climbing worth. The "climb to the clouds" should become a fixture in America motor competition.



# CINCH FOR VINGT-ET-UN



THE FIAT MOTOR BOAT LOOKING FOR VINGT-ET-UN

New York, June 27—An hundred or more ladies and gentlemen had a charming day today cruising about Long Island sound on the steamer William Storck in the neighborhood of Larchmont, as the guests of Smith & Mabley and Hollender & Tangeman. The excuse for this extension of hospitality was the running of the first match of the series of races between the new Vingt-et-Un, built by Smith & Mabley, and the fiat, fitted with an Italian engine of this make to an Electric Launch Co. hull and owned by Hollender & Tangeman. The incentive was the first holding of a \$2,000 gold cup the competing firms have given the Larchmont Yacht Club for a perpetual challenge trophy.

The race resulted in a fizzle through the gasoline supply carried giving out. In the case of the Fiat it brought the craft to a standstill at about 7 miles. The Vingt-et-Un's fuel gave out an hundred yards from the finish and she drifted over the line the winner of a practical walk over. Had not her driver husbanded his supply of gasoline it is said that she would not have made the course at all. This left even the time scored by the winner an unsatisfactory showing of her probable true speed merits.

What threatened to be a nasty dispute over engine measurement and time allowance cropped up yesterday, but was settled this morning with commendable good natured sportsmanship. The S. & M. engine revolutions had been accepted by Hollender & Tangeman at 800. A factory test of the Fiat engine had shown 1,800 revolutions, which would have meant a big time allowance and was pronounced absurd by the Vingt-et-Un's technical representative. Under the compromise the respective revolutions were assumed to be 800 and 1,250. The official measurements were given out to be as follows:

Fiat—Horsepower, 76.25; water line length, 38 feet 4½ inches; rating under A. P. B. A. rules, 85.6.

Vingt-et-Un—Horsepower, 59.70; water line length, 39 feet 9 inches; rating, 84.

Under these measurements the Fiat allowed the Vingt-et-Un 1 minute 39 seconds.

There was a long delay in the arrival of the

officials and getting out to the starting line. Fully 2 hours more were consumed at the stake boats, during which the rivals entertained the spectators with impressive flights of speed that promised great going in the race. Between times, and notably toward the end, the tenders clung to their charges. It was assumed they were transferring to the racers barrels, hogheads and tons of gasoline.

They weren't, though. Despite 10, 20 or 30 miles of gasoline consuming sprints, it does not appear that the tanks were renewed. Some "74" gasoline was said to have been offered Mr. Tangeman and declined, and that he also refused to accept Mr. Hollender's suggestion that he run over to the club house for a supply.

The course was a triangular one of 3, 6 and 6-mile legs, or a 15-mile circuit gone over twice to make the 30 miles.

It was long after 2 o'clock before the rivals came up behind the starting line. Claire Hamilton in the Vingt-et-Un maneuvered a couple of hundred yards away, while C. H. Tangeman ran back and forth near the line. The latter's jockeyship was successful, for the Fiat got over the line 11 seconds after the gun and the Vingt-et-Un not until 19 seconds later, thus losing that amount of her handicap.

This gave Tangeman a lead of an eighth of a mile. The boats headed for the Long Island shore, the dark cedar Fiat hull tossing up much spray, while the Smith & Mabley boat pursued smoothly and with little fuss. It was

nip and tuck for the first mile. After that Hamilton seemed to be creeping up. He was: for he rounded the first mark 3 miles away but 10 seconds behind Tangeman, having made up 9 seconds of his loss at the start.

In the seventh mile the Fiat suddenly stopped. Its rival shot by in a jiffy and ran on for a walk over. The first 15 miles were covered in 1:04:07. Continuing, the Vingt-et-Un finished the 30 miles in 1:58:40, or a little better than a 15-miles-an-hour rate. The last 15 miles, however, were covered in 54:33.

It was expected that A. D. Procter Smith would be on hand with the 150-horsepower Challenger that is to run for the Harmsworth cup in England next month, to show its paces to the A. C. A. motor boat committee, but he failed to appear.

An attempt is to be made today to run the two remaining races of the series.

## VINGT-ET-UN WINS SECOND RACE

New York, June 29—The Vingt-et-Un was an easy victor over the Fiat in the second race of the series of match races, winning the gold cup and making remarkably fast time for a 40-foot, 60-horsepower boat. It covered 30 knots, or 34.55 statute miles, in 1:32:50 elapsed time, or 1:31:11 corrected time. The average speed was thus 19.46 knots, or 22.45 statute miles per hour, as against the Standard's average of 22.68 miles per hour. The Fiat covered the course in 1:53:44 elapsed and corrected time, being beaten by :20:54 elapsed or by corrected time. Rough water delayed the start until 6 o'clock. Tangeman in the Fiat crossed the line 5 seconds and Hamilton 19 seconds after the gun. The latter took the lead before the 3-mile turn was reached. Hamilton says he slowed his engine to three-quarter speed on the home run on account of snells. Tomorrow the 150-horsepower challenger will be tried with the smaller boat. If it wins by a big margin it will be sent to the Harmsworth race alone.

## STANDARD AN EASY WINNER

New York, June 24—In the initial contest for the gold challenge cup of the American Power Boat Association an American-designed, American-built, American-owned and American-driven speed boat won in pronounced style and at the jump set the record for this country at the new game at a figure that places our sport and industry in this new line on a par, if not ahead, of European achievement in this direction.

The victor proved to be the Standard, a boat owned and driven by C. C. Riote. In the 3 days of racing, in which 96 nautical miles were covered in the aggregate, the American flyer showed an average rate of



VINGT-ET-UN—WINNER OF THE MATCH

speed of 20.17 knots, or 23.19 statute miles an hour.

The three races, which constituted the championship series, were run on consecutive days over the Columbia Yacht Club course on the Hudson, 16 knots straightaway and return. The race was decided on a basis of point—one for racing and one for each starter beaten. The Standard won all three, scoring 7 points, as against 4 for her nearest competitor.

The others to race were the Water Lily, driven by Frank Seaman, which was a competitor all 3 days; and the Fiat, driven by C. H. Langeman, which started the first day and withdrew within the first 10 minutes when well up with the Water Lily, having broken her rudder through collision with a log. She did not complete the other 2 days, leaving the contest to the Standard and the Water Lily.

The Standard is 58.9 feet on the water line. It is fitted with a 125.65-horsepower Standard engine, and is rated at 79.2. The Water Lily is 43.6 feet on the water line, is equipped with a 37.2-horsepower Speedway engine and is rated at 67.65. The Fiat is 31.9 feet on the water line, is fitted with 35.02-horsepower engine and is rated at 69.06. The results follow:

#### FIRST DAY

Standard won—16 nautical miles up river, time 48 minutes 40 seconds; down river, 48 minutes 8 seconds; total time 1 hour 37 minutes 48 seconds. Average speed, 19.63 nautical miles or 22.57 statute miles.

Water Lily second—Up river, 34 minutes 55 seconds; down river, 34 minutes 55 seconds; total time, 1 hour 43 minutes 12 seconds. Average speed, 15.94 nautical miles or 18.33 statute miles. Fiat disabled.

#### SECOND DAY

Standard won—Up river, 45 minutes; down river, 48 minutes 30 seconds; total time 1 hour 33 minutes 30 seconds.

Water Lily second—Up river, 52 minutes 30 seconds; down river, 1 hour 2 minutes 10 seconds; total time 1 hour 37 minutes 20 seconds.

#### THIRD DAY

Standard won—Up river, 47 minutes 43 seconds; down river, 46 minutes 37 seconds; total time 1 hour 34 minutes 21 seconds.

Water Lily second—Up river, 56 minutes; down river, 55 minutes 55 seconds; total time 1 hour 41 minutes 12 seconds.

The Standard scored 7 points during the match and the White Lily 4 points.

The superiority of the Standard was unquestionable. From the beginning to the end of the series she ran without renewals to her engine.

### ENGLAND BUYS FREELY

In the annual book published by the English government interesting information is given concerning the importation of automobiles, motor cycles and parts for the year 1903. All told the imports amounted to \$10,393,849, as against \$5,956,622 for 1902. The bulk of the increase is due to the large number of French cars and motor cycles which were imported, their amount being \$7,855,555 compared to \$4,088,424 during the previous 12 months. On the other hand, the importation of parts from France dropped \$12,081 during the same length of time. While there was but a slight increase in the importation of American motor cars and motor cycles, there was a very decided increase of trade in parts, and almost four-fifths of the \$335,908 which represents the increase in imports from the United States derives from the importation of parts.

## MADE BIG NON-STOP RUN

### "Blue Streak" Darracq Motor Runs Continuously While Car Is Driven Over a Thousand Miles.

New York, June 28—Shortly after midnight this morning the Darracq "Blue Streak," which has won fame the past year in track and straightaway contests all over the country, completed successfully the first 500 miles of its attempt to run 1,200 miles without stopping the engine. The trial is being made by making two round trips of 500 miles each between this city and Boston, with one round trip to Philadelphia to follow. A. L. Pierard, with William Abrandt as chauffeur, does the driving to Boston, F. A. La Roche, accompanied by Al La Blane, making the runs to this city.

C. S. Wells and F. Ed Spooner alternate as umpires.

Pierard left the La Roche garage Sunday afternoon at 5:55 p. m., but lost his way between this city and Bridgeport, so that he did not get to New Haven until 11:05 p. m. He reached Hartford at 2:05 a. m. Sunday, Springfield at 4:08 a. m., Worcester at 7:30 a. m., and Boston at 9:45 a. m. He was met at the Westminster hotel by several members of the Chronograph Club and by Mr. La Roche, who took the wheel and started back 5 minutes later.

The Darracq consumed 16 gallons of gasoline on the trip. Two stops were made—one of 8 minutes at New Haven and one of a half hour at Palmer in search of gasoline. Pierard was held up at the latter place and forced to pay \$5 for 5 gallons. His only discomfort on the long night ride was gnats getting in his eyes, it being impracticable, he says, to use goggles at night. Neither he nor Mr. La Roche experienced any punctures or troubles of any kind.

### LA ROCHE IS SUCCESSFUL

New York, June 29—F. A. La Roche, in his Darracq car, arrived in New York at 1:15 P. M. to-day after covering 1,133 miles over the roads between this city and Boston without the engine stopping; or, rather, 1,053 miles of the journey were traveled without the motor halting for an instant. Then, to avoid an accident at New Haven, when a horse shied in the road and threw its lady passenger to the ground, La Roche drove his car into the ditch and shut off the power entirely. It was for but an instant, however, and he was soon on the road again. The journey established a new record in this country for continuous running.

### SLOW DEBUT IN CANADA

The first automobile meet ever held in Montreal, Canada, was given June 19, and caused a great deal of disappointment to a very large crowd, which the local papers variously estimated at from 5,000 to 10,000. In the first place there was a delay of nearly an hour and a half before the first event was called, and then the 999, the old Ford racer, which was to be the principal attraction, proved tame. While the big racer was being made ready an exhibition race was run among a Rambler and two Stanley steamers. The first machine proved the fastest and covered the 3 miles in 5:39 3-5. Then big 999 came

on and was sent off for a 3-mile exhibition. After 2 miles it stopped, the time being 3:15. The three local cars had to be driven around the track to keep the crowd from becoming noisy. The Rambler again beat the two Stanley machines. The 999 was fixed at that time and again sent away for an exhibition. After a mile and a few hundred yards it pulled up "lame," to the disgust of the crowd. There was more doctoring, and again it started but when the time of the mile was announced the crowd began to disperse, seemingly much dissatisfied.

### AMATEURS AT BRIDGEPORT

The races which were held in Bridgeport, Conn., last Saturday, under the auspices of the Automobile Club of Bridgeport, although of a purely local character, attracted about 1,000 spectators who seemed to greatly enjoy the different speed contests. There were not many contestants in the different events, yet they were hotly contested, especially the match race between Dr. Perry and Dr. D. N. Carson, both driving steam cars. Dr. Carson won the first heat and Dr. Perry the second and third. A match race between A. L. Riker and H. A. Budlog was won by the former with a Locomobile, who covered the 5 miles in 9:14. The 3-mile race for two-cylinder runabouts was won by George Kellogg from T. H. McDonald, the time being 8:05. Oscar Hedstrom, Indian, won the 5-mile motor cycle race from G. W. Hale, and in the speed judging contest A. L. Riker made the best time, covering the attempted 6-minute mile in 6:01, while H. K. Reid required 6:40 for the same distance.

### NEW YORK MEET JULY 16

New York, June 24—There will positively be a race met at the Alfred City track on Saturday, July 16. Elfrede Reeves, secretary of the New York Driving Club, authorized to-day this announcement to be made. There will be four open events, in addition to two or three match races of special interest, particulars of which will be made known later. Entry blanks will be ready in a day or two. They may be obtained from Elfrede Reeves secretary, 390 Washington street, New York.

The open events will be as follows:

Fifteen-Mile—Free-for-all, for machines of any motive power, weighing from 1,432 to 2,204 pounds. First prize, silver trophy, value \$100; second prize, silver trophy, value \$50.

Ten-mile race for machines of any motive power, weighing from 881 to 1,432 pounds. First prize, silver trophy, value \$100; second prize, silver trophy, value \$50.

Five-mile race for machines of any motive power, weighing from 551 to 881 pounds. First prize, silver trophy, value \$100; second prize, silver trophy, value \$50.

Five-mile Great Empire Handicap, free-for-all, for machines of any weight, any horsepower and any motive power. First prize, silver trophy, value \$100; second prize, silver trophy, value \$50.

The handicapping will be done by E. T. Hirdsall and A. L. Riker, special representatives of the A. A. A. racing board.

### CHANCE FOR TRUST

With the N. A. A. M., controlling the local show promoter and the A. L. A. M., controlling the local dealer, it is now up to the A. A. A. and the A. M. L. to control the local buyer. Then the N. A. A. M., the A. L. A. M., the A. A. A. and the A. M. L. might get together, pool their interests and sell the whole thing at a good figure to J. P. Morgan.



S. & M. FIAT CUP.

# MOTOR AGE

Published Every Thursday by  
THE TRADE PRESS CO.

1303 MICHIGAN AVENUE, CHICAGO  
Telephone Calumet 2011

New York Office, 140 West 35th Street,  
London Office, American Publications Bu-  
reau, 38 Manor Park Road, London, W. N.

MEMBER NATIONAL  
ASSOCIATION  
OF AUTOMOBILE  
MANUFACTURERS

MEMBER  
CHICAGO TRADE  
PRESS  
ASSOCIATION

Entered at the Chicago Post Office as Second Class  
Mail Matter

Subscription, Two Dollars per Year  
Foreign Subscription, Four Dollars

Any Newsdealer may obtain Motor Age through the  
Western News Co., Chicago, or any of its  
branches, on a renewable basis

## PLACING THE BLAME

THERE were in Chicago last Sunday four accidents in which automobiles were entangled, and in which two persons were killed and five others injured. There have been described by the daily papers as automobile accidents. Only one was an automobile accident, and this caused by an obstruction in a supposedly first-class highway. Two of the others were electric railway accidents, and the fourth was a steam railway accident.

The most serious accident was at the point where Austin boulevard crosses the tracks of the Elgin, Aurora & Chicago railway. Here Mr. and Mrs. George E. Dixon were run over by one of the mile-a-minute third-rail electric cars of this road. Driving north on Austin avenue, Mr. and Mrs. Dixon were temporarily shut off from a clear view of the railway track on account of the passing of another automobile southward bound. When right on the tracks, their machine was struck by the electric car and somehow in the collision the gasoline tank was burst and the vapor ignited. With burning clothes, both Mr. and Mrs. Dixon were hurled a long way, and when picked up Mr. Dixon was dead. Mrs. Dixon died a few minutes afterward. The electric car tore on its way down the track. Two hours afterward the motorman and conductor were arrested. They said the brake was so disarranged they could not stop.

At the corner of Michigan avenue and Eighteenth street, an Indiana avenue trolley car, fully loaded, even to the running boards, crossed Michigan boulevard without first stopping, as the law prescribes. Two automobilists, H. E. Bell and W. O. Austin, struck it. Both were thrown from their cars and the former was severely injured. Two of the passengers of the trolley car were injured also.

M. F. Shugrue and W. F. Mearse were struck by a Chicago & Northwestern railway train near Glencoe. Both jumped and the former was injured.

In the evening Mr. and Mrs. Smeeth and friends, of Oak Park, were driving homeward by moonlight over the Sheridan road, supposed to be the best highway in the vicinity of Chicago. At a bridge near Glencoe they suddenly came upon an obstruction which had not been there when the place was passed in the morning. The car was hooked, and it began to slip

down the side of the ravine. Mrs. Smeeth jumped and was severely injured.

These are the accidents which some of the daily papers, at least, have combined into a series to show what a menace to the safety of the public is the automobile.

The third-rail line accident being the most notable on account of its fatality, it is only natural that it should create more or less agitation over the danger at crossings, and despite the tendency on the part of some of the Chicago newspapers to treat these accidents as automobile accidents, others of them and many citizens and city officials recognized the real source of danger at the bottom of them, and especially the most deplorable one, and there has been started an agitation tending toward the forced elevation of the third-rail tracks within city limits.

The Chicago Tribune, which has been notably aggressive in its co-re of reckless automobilism, was among the first of the papers to probe this accident and to attribute it to its real causes.

The Tribune, as a typically conservative paper, has been right in censuring naturally reckless automobilism. It has been, perhaps, too harsh in its sweeping condemnation of automobilism as a dangerous means of travel. That it calls the Elgin, Aurora & Chicago railway to account in this case shows that public sentiment—as reflected in popular newspapers, or led thereby, as the case may be—is gradually, but surely, reaching a point at which it recognizes accidents in which automobiles are concerned as likely to be due to other factors or conditions as to reckless automobile driving.

It would be foolish to assert, even in an automobile paper, that there is not some reckless automobile driving which should be deplored and discouraged. It is equally foolish to lay the burden of every accident upon the automobile which is entangled.

In Chicago and every other large city there are street conditions which tend toward danger. There are daily unavoidable accidents. It hence becomes the duty of every one using the streets to attempt to mitigate this danger as much as possible. This applies equally to pedestrians, horse drivers, automobilists, street car motor men and railway engineers.

The fact that some automobilists have not exercised this reasonable care, does not make it just to accuse automobilists sweepingly as responsible for all of the accidents in which they figure, nor to count them as the most dangerous element in the use of the highways.

The street cars are common delinquents of the law. By actual timing, as was shown by MOTOR AGE last summer, Chicago electric cars average 20 miles an hour on straight runs between blocks, and frequently run across street intersections without slackening the speed. All street cars are supposed to stop before crossing boulevards. This rule is constantly broken.

Disregard of the rights of pedestrians, horse drivers and automobilists on the part of street railways and railways entering Chicago via grade-level tracks, is the cause of more accidents than all of the reckless automobilism.

All forms of recklessness are to be deplored. The automobilists, as a class, however, should not be segregated and wrapped in a red flag. It is probable that the percentage of reckless automobile drivers is less than the careless and reckless motor men on the street cars.

The accidents of last Sunday have brought

the danger of fast and carelessly handled electric railway cars prominently before the people. In laying the blame where it belongs in those instances, let the public take a new view of automobilism and hereafter grant it the fairness it grants other mediums of travel—to be judged according to its actual blame, not by prejudice.

In this connection the report of the Civic Federation concerning the accidents in Chicago during 1903 is interesting.

There were altogether reported during the year, 10,707 accidents due to all causes. Summarized, the accidents are divisible as follows:

Street railway accidents.....	2,005
Steam and elevated roads.....	914
Caused by teams and vehicles.....	869
Caused by falling.....	1,255
Caused by falling objects.....	492
Caused by explosions.....	117
From various causes.....	2,893
From personal negligence.....	1,156

The street car accidents have been divided as follows:

Alighting from car.....	247
Boarding car.....	242
Car colliding.....	492
Car striking wagon.....	492
Falling or thrown from car.....	129
Falling of car in starting or stopping.....	13
Run over or struck by car.....	137
Knocked off car by bridge.....	23
Crushed by car in tunnel.....	8

In strictly steam and elevated railway accidents the total of 914 have been subdivided as follows:

Run over or struck by train or engine.....	456
Train colliding with street car, wagon, or other train.....	19
Boarding and alighting.....	124
Colliding with other vehicles.....	38
Elevated trains and platforms.....	38

The 898 street accidents due to teams and vehicles of all sorts have been divided as follows:

Falling or thrown from wagon.....	367
Run over or struck by team.....	367
Struck or run over by automobile.....	31
Run over by bicycle.....	15
Struck by horse.....	15
Kicked by horse.....	67
Thrown from horse.....	8

Accidents from some of the other causes have been divided as follows:

Falling from stairs.....	149
Falling from roof or through shafts.....	49
Falling from building under construction.....	111
Falling down elevator shafts.....	24
Falling in street.....	157
Falling on sidewalk.....	24
Falling into river.....	24
Falling from ladder.....	24
Falling from building material.....	24
From collapse of building.....	26

Pertinent comparisons may be drawn from these figures.

Twenty-eight per cent of all of the accidents were caused by street, elevated and steam railways; three-tenths of 1 per cent by automobiles.

Only 8 per cent of all the accidents were caused by all classes of vehicles using the streets, and automobiles were accountable for 4 per cent of this 8 per cent, or a less percentage of this 8 per cent total than those caused by persons being kicked by horses.

Three-tenths of 1 per cent of all of the accidents were caused by the collapse of buildings; the same percentage by automobiles, and the same by falling down elevator shafts. Number the elevator shafts!

Two and one-half per cent of all accidents were caused by slipping and falling on the sidewalks; three-tenths of 1 per cent by automobiles. Number the sidewalks and enforce the anti-spitting ordinance!

Six-tenths of 1 per cent of all of the accidents were caused by falling through skylights; three-tenths of 1 per cent by automobiles. Number the skylights!

Two and four-tenths per cent of all of the accidents were caused by falling building material; three-tenths of 1 per cent by automobiles. Number the Irish!

MOTOR  
CAR  
FAMILY  
TREES

No. 11  
THE  
PACKARD



12-H. P. B. Special 1899

12-H. P. Model F 1903

21-H. P. Model G 1902

12-H. P. Model F 1902

9-H. P. Model E 1899

12-H. P. Model E 1901

20-H. P. Model E 1901

12-H. P. Model C 1901

Model A, the first Packard 1893

12-H. P. Model C 1900

22-H. P. Model L 1904

21-H. P. Model K 1903

## ACROSS INDIANA AND ILLINOIS



WHERE THE ROADGATE GAVE WAY

YOU all have heard the expression, "There is many a slip," but I never realized how very true it was until last week, when, just as we had commenced to congratulate ourselves that our 1,400-mile trip was about concluded in safety, we had an adventure that none of us will be apt to forget for some weeks to come.

We had left La Porte, Ind., and were howling merrily over good roads at a speed of probably 22 miles an hour when we encountered crushed stone on top of the roadbed. We slackened down some, expecting to hear a tire pop at any time, but still were moving right along, when, just as we were rounding a curve, the entire roadbed gave way, and machine and its three occupants commenced to slide over a 20-foot embankment. We all tried to jump at the same time, and two of us succeeded in getting out, but the steepleman, hindered by wheel and lever, as well as the acute angle at which the car was tipped, was unable to get out.

In the meantime, under double brake, with the reverse almost locking the rear wheels, the Pathfinder had come to a stop on the very brink of the precipice, two wheels over and the machinery resting on the ground, which was still slipping and sliding downwards. To fasten our coil of rope to a neighboring tree and to the rear wheels took but a few seconds, and we then felt safe for a few minutes, although the forward wheels were over the bank by this time.

By the aid of two fence rails, a pulley borrowed from a neighboring farmer's barn, and our combined strength, we eventually pried and hauled our car back onto the road and found upon examination that barring a twisted mud guard, an engine almost choked up with dirt and more scratches to our enamel, the Pathfinder was little the worse for its close approach to over the quarry brink. It seems that in making Indiana roads no rock bottom is laid, the crushed stone being emptied on earth and loose dirt piled up on each side to keep the rock in place. At the point where we came so near going over there should be a stone wall of at least 15 feet and a good strong rail placed on top of the stone wall. The farmer from whom we borrowed the pulley told us a team of horses, wagon and two men had gone over the same bank some 4 days previously, badly injuring both horses. In New York state split is brought against

the township having custodianship over such roads, but the entire incident was treated with indifference by the Indiana natives.

In Illinois there is a game law protecting quail for 5 years and the country roads over which we passed abound with these game birds. Visions of quail on toast, as served in New York restaurants, were constantly before us as we heard the call Bob White and saw many a covey of these fine birds flying so near us that it would have been possible to have shot them with a revolver. Rabbits, too, are very plentiful in both Indiana and Illinois, and we actually ran over one big brown fellow who appeared to be blinded by the rays of our searchlight. Woodchucks, gophers and wild ducks have been sighted from the Pathfinder.

When we arrived at Chicago we found the repudiational national convention in session and hotel accommodations were scarce. While wondering where we could secure good lodging, the members of the Chicago Automobile Club came to our assistance and insisted that we remain at the club house on Michigan avenue, where a number of nicely furnished rooms are always on hand, as well as a very neat restaurant located in the basement, at which anything in the line of estables can be secured at moderate prices. Next door to the club house is a fine, large garage, into which we ran the Pathfinder for the night.

The Chicago Automobile Club now contains almost 400 members, all of whom are active in club work and ready to lend a helping hand to any movement for the betterment of automobile conditions in and around Chicago. We called on Frank X. Mudd and were furnished with an accurate description of the roads between Chicago and St. Louis.

Since equipping the Pathfinder with an extra tire, which we carry strapped in a tire case on our front deck, we have been obliged to explain continually that the black locking ring is not a life preserver for use in fording rivers, as the rural inhabitants seem bound to believe.

Many times since leaving New York city we have listened to tales of sunb, but as we had struck sandy patches upon several occasions, through which our car had always struggled successfully, we were inclined to laugh at the thought of sand sticking us. Now we have changed our minds. Sunday was spent at La Porte, Ind., and toward night we loaded three other automobilists into our car and the six of us, in a car originally intended for two and later equipped for four, started for Michigan City, some 14 miles away. There is a good macadam road all the way, I have been told, but if there is we got off our track and ran into sand.

When we first struck it we were running down hill, until we plowed through for a quarter of a mile until we had a short bill to ascend, when we found ourselves stuck. We had plenty of power and the rear wheels continued to turn, raising a small sand storm, but only resulting in our digging a hole for the rear wheels to settle in, while the Pathfinder remained hard and fast aground. Once more we were glad that we had a 1,200-pound car

and not one in the 2-ton class, for with one man at the wheel, the engine running and the remainder of the crowd pushing we soon got a foothold on hard ground, and forgetting our original intention of visiting Michigan City, made for La Porte.

Chesterton, Ind., is scheduled for the noon-day stop on August 6. While the town itself, being half way between South Bend and Chicago, is admirably located for a noon-day stop, there are absolutely no places in the town where meals can be had. The two hotels are worse than none at all, and one of them is going out of the hotel business and will start in the saloon business instead. The other is run in the loosest manner and caters principally to the hands of an adjoining factory. There are one or two restaurants, but they are small and ice cream and soda water is their principal output. At La Porte, about half way between South Bend and Chesterton, excellent hotel accommodations can be had, and also at Hobart and Hammond, some miles west of Chesterton.

While interest in the coming big run has been manifested all along our route, no state seems so enthusiastic as does Illinois. At every town at which we stop we are questioned about the probable number of machines, their value and the number of tourists they will carry. A large percentage of our questioners are automobilists, some of whom contemplate entering the run. We are furnished with an escort out of almost every town. Dr. J. K. Means and party of friends guided us from Pontiac through to Chenoa last week, where we all ran into as pretty a thunder storm as has been our lot to encounter thus far. The crew of the Pathfinder, attired in leather and rubber, suffered little inconvenience, but the good doctor and his friends were soaked.

At our different stopping places we are entertained by all the local automobile stories of the neighborhood. These as a rule are commonplace, but one told us last week, while it sounded a little distorted, I am led to believe really happened. A prominent physician in an Indiana town became very enthusiastic over automobilism and ordered a runabout. He had frequently guided a machine belonging to a friend, while that friend was with him and attended to starting and stopping, so when his machine arrived, he inquired how to start it and jumped in. He had neglected, however, to ask how to stop, and after running around town for 2 hours asking everyone he met how to stop, ran his machine into a rail fence rather than to continue his trip around town until the gasoline gave out.

At Joliet, an enterprising city between Chicago and Pontiac, we found two first-class automobile garages. Upon entering the first one we found the proprietor expecting us, having read the account of our trip in *Motor Age*. "So this is the Pathfinder," he said: "Well, I expected to find a hard-working machine and crew, and I'm not much disappointed. Put up for the night! Well I guess so, and if there is anything I can do for you, let me know."

Now, just one more word about dogs. I know I have mentioned the subject in almost every week's letter, but no one who has not taken an extended trip through parts of the country where the automobile is comparatively unknown has any idea what a nuisance the dog question amounts to. At almost every farm house along the road great vicious dogs of every known breed and many unknown com-

EDITOR'S NOTE.—This is the sixth in a series of articles by W. S. Harrison concerning a trip from New York to St. Louis over the world's fair tour route.



linations of breeds rush out at us, running sometimes for nearly a mile either in front or alongside our automobile, barking and snarling. Very often one running in front of our machine falls and then we run over him, sending our car into the gutter and threatening to tip us over entirely. We carry revolvers, but not wishing to shoot the brutes nor to cause any greater friction between the farmers and the automobilists than exists at the present time, we have never used them. We tried ammonia, but have found out that when running at 20 miles an hour against the wind we are more affected than the dogs. Time and again we have loaded our car with stones and saluted the dogs with a valley upon their approach, but we would seldom hit one and our stone throwing only attracts unfavorable attention from the farm houses where it is witnessed.

It remained for a country lad to solve the problem for us, and I think we have it solved for good. We were coming through the woods in our machine when we noticed a barefooted boy bring down a bird with a sling-shot. We stopped, examined the sling shot, and, with the dogs in our mind, gave him a piece of silver for it and the fine bird shot he carried in his pocket. Now when a dog comes tearing after us, one dose of shot on the flanks sends him howling back home, with a wholesome dread of automobiles, while the operation is so quick and sure that the owner of the dog never knows what ails him. There is a fortune in sight for some enterprising manufacturer to make sling-shots for the motorists, and as a sure cure for the dog trouble there is nothing to equal it.

#### VANDERBILT CUP FINISHED

New York, June 25.—The Vanderbilt cup, the prize in the international team race to be run in this country on October 8, is now on exhibition in the window of Tiffany & Co., its makers. The cup is 31 inches high, including its ebony base, contains 481 ounces of silver, and has a capacity of 10½ gallons. The trophy is of simple and classic design. On one side in relief is a presentation of Mr. Vanderbilt driving his 90-horsepower Mercedes, which scored the world's mile record of 39 seconds at Ormond. On the other side is the following inscription: "Challenge cup presented by W. K. Vanderbilt, Jr., to the American Automobile Association, under deed of gift, to be raced for yearly by cars driven 1,000 kilos. Won by —." A wreath of laurel encircles the rim. Mr. Vanderbilt declines to state the cost of the trophy.

## NEWARK ENJOYS PARADE

### Affair Well Conducted With Over a Hundred Cars in Line—Neighborhood Officials Pleased

Newark, N. J., June 27.—The officers of the New Jersey Automobile and Motor Club deserve congratulations for the manner in which they arranged last Saturday's parade, which was the first organized by the club. It would be unjust not to make a special mention of Dr. Clement Morris, who acted as grand marshal, made up the different divisions and gave the general instructions during the parade. Other clubs could learn some things from this man, who deserves credit for having been able to make the affair a real parade instead of a leading contest or a racing event.

Promptly at 2:15 the start was given to the motorists who had gathered in Lincoln park and lined up in near-by streets. The route chosen for the occasion was the following: Broad street to Mt. Pleasant cemetery, Belleville avenue, Washington avenue, Irving street, Sumner avenue, Fourth avenue, Clifton avenue, Park avenue, East Orange; Washington street, Harrison street, Central avenue, South Eighth street, Newark; Waverley avenue, Bergen street, Clinton avenue and back to Lincoln park.

Although there was no band heading the line, there was a large crowd on the sidewalks and in the public squares, and the interest which the people showed was noticeable. Many people from outlying sections of the town came to the thoroughfares through which they knew the automobiles were to pass.

There were more than 100 vehicles in line, as well as several motor cycles. They went at a moderate gait and kept within about 20 feet from each other, and whenever a driver would go too fast the officer in charge of the particular section promptly notified him of the fact and ordered him to keep within the limits.

The mayor was prevented from attending the parade and thus Chief of Police Hopper had the honor of riding in the first car with President Frederick R. Pratt, Judge Egbert and Police Commissioners Bannmann and Scheller were the guests of Dr. James R. English, vice-president of the club. Mayor Brown, Chief of Police Blaurock, Police Commissioner Fred Castle and Miss Castle, all of East Orange, were also special guests. Members of the club were present in large numbers and a score of ladies.

After the event was over there was much comment exchanged about the usefulness of such displays. The general opinion was that there ought to be a great many more. "If the people can see a great many cars passing by at one time it will be more interesting to them than when they see only one or two machines," said one dealer. "It also would be effective upon horses. I also believe that sales will be easier, because a great many prospective buyers thus obtain a fair idea of different cars."

#### SHOWED SAM JONES

Toledo, O., June 27.—Many of the officials of the city, including Mayor Sam Jones and Chief of Police Perry D. Knapp, were taken in automobiles last week to many sections of the town, some of which they never had seen before. About thirty miles were ridden within the city limits, but not exactly within the city's speed limit. The cars were driven by well-known citizens whose object it was to give the officials an opportunity to get to places where they probably would not otherwise have gone, and also to try and get them to feel better disposed towards the motoring problem.

A lunch was served at the Toledo Yacht Club, where several speeches were made. The mayor stated he had enjoyed the trip immensely and that he felt quite at home among the motorists. He said he would be still more at home if in the penitentiary, "for they send people there for breaking laws." President E. J. Marshall of the Automobile Club of Toledo remarked that the party had been driven at a greater speed than the automobile ordinance permitted, and yet no one seemed to notice the fact. He urged the officials to change the speed limit, which at present permits 8 miles an hour, and which is entirely inadequate. The president also stated that the automobile club would be willing to pay the wheel license providing the funds thus collected would be used for repaving the streets and other thoroughfares.

The automobile parade which had been arranged by the Toledo Automobile Club, which took place last Saturday, obtained a great success, both on account of the large number of cars which took part and the crowds which lined up along the line of march. There were fully 100 cars in peaceful procession. Many were splendidly decorated and the one driven by F. V. Falardeau was awarded first prize, while second prize went to Dr. Albright's car and George Soules, in a Buick-Toledo car, won the speed contest.



PARADE THROUGH THE ORANGES LAST SATURDAY OF THE NEW JERSEY AUTOMOBILE AND MOTOR CLUB



## TRAPPERS STILL BUSY

### Connecticut Constabulary Still Laying for Motorists Who Exceed the Legal Speed Limit

Hartford, Conn., June 27—While no arrests have been made by the Hartford police since the recent round-up in which the most prominent motor car drivers of the city were taken in, another haul is coming. The police have been busy for the past week and at headquarters it is hinted that another course is likely to be measured off. The patrolmen have all been furnished with copies of the registration list by the secretary of state, which, fortunately for recent purchasers, does not include the last 300 cars to be licensed. The cops to do the timing will have split second watches, and this time there can be no question as to their timing, says the chief of police.

Motorists generally have been very careful in the city since the last arrests, and the sale of speedometers has been large since. General Wallace T. Fenn, of Wethersfield, has settled his case, which he appealed from the New Britain court's decision. General Fenn, however, swears that he knows what 15-mile speed is; that he was warned by small boys of the trap, and that he was running under the regulation at the time of his arrest. There wasn't promise of the suit being thrown out in the higher court, and the general settled rather than stand trial.

Some speeding strangers who killed chickens and dogs in the town of Wethersfield brought the speed measure to the attention of the town officials, but after deliberation they decided to establish no trap to punish many because of the abuse by the few.

The famous trap at Enfield, Conn., nearly 3 miles long, as straight as a plank and smooth as a billiard top, and the one which caught a large number of motorists touring from New York and Boston, is practically at an end. The officers who now patrol it are meeting with such small success in fee collecting as to make the game hardly worth a Sunday's vigilance. Other days of the week the trap is not maintained, as this is good growing weather for the tobacco crops and the attention of the constabulary is needed in the fields. Small boys are holding up the drivers of strange cars and putting the drivers wise to the trap. They are being liberally rewarded.

An attempt was made last Sunday to attract the kids from the site with threats, but the boys got Judge Hill to back them up in their rights and the constabulary gave the work up. Only one man was caught. He put up a \$15 cash bond and hasn't been heard of since.

During the coming winter when the lawmakers of the state again convene the question of increasing the speed limit will come up, and will be one of the issues. Influential motorists in all towns are taking a healthy interest in the plans for the enforcements and determining the stand taken on the automobile speed question by the candidates for representatives to the state legislature. In some towns where the contest waxes warm the automobile is proving itself a factor to split the party in power, and there are evidences that the question will cut much of a figure. It now seems probable that the

lawful rate of speed will be increased to 15 miles in cities and towns and 20 miles in rural roads. The present law, after which many states have patterned, is 12 miles in cities and 15 on the road and was designed, spoken for and pushed through by F. N. Mansons, representing the town of Forestville and one of the foremost motorists of the state.

There is certain to be a good deal of opposition to raising the speed limit, however, and there is a chance that it will be successful. In Connecticut the town system of representation obtains and a hamlet with 100 voters has equal representation as Hartford and New Haven and the largest cities of the state. There are 168 towns represented and the farmer view will have to be reckoned with. The grangers, however, are not anxious to oppose the popular opinion of the cities, which has declared itself in favor of a wider radius of liberty for owners of cars. There is a strong sentiment in the state for a return to the common law of equal privileges for all users of the road with no restrictions upon the motorist beyond a respect for the rights of others and responsibility for damage occasioned.

### NO MORE TEMPORARY PERMITS

Washington, D. C., June 24—District Commissioner West, who has immediate charge of automobile affairs of the district, issued an order this week that created quite a stir in the ranks of automobile owners who have been operating their machines under temporary permits and who have failed, after due notice, to take out permanent permits. The order directed that the temporary permits be revoked and the names of the delinquents were submitted to the police department with instructions to proceed against the persons named.

When the automobile regulations came into effect some months ago many applications were made by automobile owners for temporary permits. After consideration the commissioners decided to grant these temporary permits on the ground that persons owning or operating automobiles should not be arbitrarily deprived of the use of the machines, provided that they appear before the examining board at its next meeting, or within a reasonable time. This contrary, it is said, was much appreciated by the automobilists, and in nearly every case the person holding the temporary permit made prompt appearance before the board and passed the required examination.

The secretary of the automobile board recently went over the list of those holding temporary permits and found that many of them had been holding such permits much beyond the usual time. They were notified by letter that they must appear at once for examination, but no heed being paid to the official summons summary action was then taken.

It is understood that if in the future the courtesy of the temporary permit continues to be abused it will be abolished, and that no person will be allowed to operate an automobile until after appearance before the automobile examining board.

### GLAD HAND TO ALL

One peculiar thing about Senator Morgan's Mount Washington hill climb is that, winner or loser, each contestant is sure of a glad hand at the top.

## BACK FROM FIRST TOUR

### Rhode Island Club Enjoys a Trip To Portsmouth and Return Without a Single Serious Mishap

Providence, R. I., June 25—This evening at 9 o'clock the members of the Rhode Island Automobile Club who went on the tour to Portsmouth, N. H., returned to Providence after traveling almost 300 miles, and all report that the tour, which is the first that the club has ever held, was a most enjoyable occasion. The members and their friends to the number of forty started from this city on Friday morning in eleven cars, and not an accident worthy of the name occurred to mar the pleasure of the event.

During the entire history of the club it has been one of the most progressive among all of the clubs which belong to the American Automobile Association, and when, just after the failure of the Automobile Club of America to arrange a run on Memorial day, some of the members of the runs and tours committee of the Rhode Island club proposed that a tour be prepared for those in Rhode Island who would like to participate, the conservative owners demurred, pointing to the experience of the New York organization as an awful example. In spite of this the committee, whose chairman is R. Lincoln Lippitt, a man of a deal of energy and still more enthusiasm, made all of the necessary arrangements, laid out the route, engaged quarters at the hotels along the route, and studied all of the road maps that were available, and finally selected the route that has been outlined in the columns of the *Motor Age*, which was to Boston from Providence, to Magnolia, Mass., thence all over Cape Ann, and later to Portsmouth, N. H. The schedule which had been prepared was carried out to the letter, and only one car had to turn back, that one being afflicted with a poor set of tires.

The start was made from the Crown hotel in this city at 10 o'clock Friday morning. R. Lincoln Lippitt steering the pilot car, which was a Winton. As his guests he had Dr. Charles D. Winsor, Elliot Flint and a representative of *Motor Age*. There were only six cars at the start, but that fact did not discourage the committee, as it was expected that some of the men who promised to come would leave for Boston directly from their homes. The road to Boston is one of the best in Massachusetts, which is saying a great deal for a road in a state which is famous for its excellent highways. The finest macadam is the nature of almost all of the entire 48 miles, and on that account all of the starters arrived at the Hotel Lenox, the rendezvous, shortly after 12 o'clock.

It was found that there were eleven cars on hand when all were assembled, three Wintons, two Stanleys, two Pop-Tolides, and one each of the Peerless, Autocar, Thomas and Searchmont. Lunch was served at the Lenox, and then all started for the second stage of the journey, which was to end at Magnolia, Mass., about 30 miles distant. On the route is the famous Lynn Woods, a park noted for its beauty, but automobilists are barred from using it. The committee had previously written to the park commissioners of Lynn, Mass., asking for permission to see the Woods, notwithstanding the rule which they had promulgated, and a reply was received which not only gave all that was asked, but also announced

that the Rhode Islanders would be met at the city line by an automobile which would pilot them through the forbidden ground. True to their word the park commissioners were on hand, and with the courtesy of a mayor passing over the freedom of the city to a visiting monarch, they played the hosts, to the great enjoyment of the tourists.

The run to Magnolia was completed without incident, the route going through some of the most picturesque country along the north shore. At a meeting of the club members held that night in the hotel some of them found fault on account of their inability to follow the pilot car. The tourists were strung all along the road during the day in order to avoid the dust arising from under the leading machines, and the owners said that all of the ears ahead of them were often out of sight when they came to a cross-road which was somewhat confusing. Mr. Lippitt was equal to the occasion, however. He went into the office of a Magnolia newspaper, had a great amount of paper put up into large squares and these were placed in his car. The next day many handfuls of this paper was thrown on the road at a turn, and not a complaint was heard afterwards. This method was used for the remainder of the tour and proved to be most successful.

On Saturday F. A. Ballou announced that he would be unable to go further in his Pope-Toledo on account of poor tires, which had been causing him some trouble ever since he left Providence. All of the others started out for Portsmouth by the way of Cape Ann, and for the entire morning the ears sailed over the smooth roads around Gloucester which border the ocean for many miles. Lunch was served at the Wolf tavern in Newburyport, and in the afternoon the enthusiastic motorists went over the new bridge which spans the Merrimack river, across the marshes of Salisbury, and through Seabrook and Hampton Falls to Hampton Beach, N. H.

They had just arrived at this place when an electrical storm, more severe than has been experienced in eastern New England for many years, broke, and all of the machines made a fast run for shelter in the house of the New Hampshire Automobile Club at Boar's head. Here they were provided with all of the comforts and conveniences that were available, and the ladies of the party, of whom there were a large number, had everything that New Hampshire could furnish for their ease. After the storm was over the run to Portsmouth, 14 miles, was then finished.

To-day the club started from Portsmouth, had lunch in Salem, Mass., arrived in Boston about 3:30 in the afternoon and came to this city about 9 o'clock in the evening. At the present time the Rhode Island Automobile Club has about 150 members, and that almost one-third of them should turn out on the call for the first long tour has encouraged the officials greatly.

#### HEARING POSTPONED

New York, June 22.—The hearing of the protest of the Automobile Club of America and Associated Cycling Clubs of New York against the proposed alterations of the Boulevard Lafayette, whereby the equestrians are to be given a 40-foot path and the automobilists, cyclists and other vehicle users are to have no wider roadway than the equestrians, set for to-day, was postponed 2 weeks. The proposition to discriminate in favor of the equestrians has aroused unusual indignation.

## COMPLETING TOUR PLANS

### Arrangements Made for Hotel, Garage and General Supply Accommodations Enroute

The touring committee of the American Automobile Association is at present at work on hotel accommodations and garage and repair shop facilities along the lines of the various routes. The committee announces that at practically all night stops more than ample accommodations have been secured for man and machine, and at over half the noon stops the luncheon arrangements have been settled.

In nearly all cases covered garages are available. These will be large enough to take care of the tourists, unless the number should exceed greatly the estimated total of entrants. In the few instances where storage will have to be in the open air, the committee has obtained the use of enclosed yards, where the machines will be under the eyes of watchmen during the night. At all night stops the committee is arranging for adequate supplies of gasoline; in several cases tank wagons being contracted for to be on hand at the garages.

Reports from all parts of the country continue to show a lively interest in the tour. During the week a party, to travel in two machines, has been formed at Philadelphia, and plans are being formed in several cities for the formation of similar parties. In addition to these touring parties, many individual entrants are announcing themselves. A. B. Lambert, in charge of the affairs in St. Louis, has had a conference with Governor Francis, president of the exposition, and the latter has promised to do whatever he can to make the parade of the tourists a grand success on August 11. Governor Francis has issued a permit for the parade to enter the exposition grounds. The suggested line of march at St. Louis submitted by the St. Louis committee is as follows: On the morning of August 11 all machines will meet at Twelfth and Pine streets, and proceed west on Pine to Grand avenue, north on Grand to Lindell avenue, and straight out Lindell avenue to the grounds. From there the line of march will be through the grounds and out one of the gates, entering Forest park, where the tour will disband and refreshments will be served.

The civic committee of St. Louis has sent Mr. Lambert word that all ordinary regulations will be suspended on that date and the freedom of the city extended to the tourists. The St. Louis Automobile Club has tendered the use of its new clubhouse and grounds to the tourists on August 10 and during the days the tourists are in the city.

A Boston gentleman in sending his formal entry for the tour sends also a letter with which the following is quoted: "I confess the only hesitancy I have to making the trip is the fear that there may be a tendency to race and make it an endurance contest, which I should strongly object to. I shall start out on the journey in a tired condition and not at all in the mood for galloping over the country. I realize, too, there might be some diversity of opinion as to what constitutes suitable weather. If, for instance, I should want to lay over for a few hours in spite of the decision of the committee that it was the best to go on, and in consequence of the layover I should lose my certificate at the end of the tour, I should consider it a hardship. I can readily understand that the tour must have

some sort of an organization, and yet it seems to me it would be much better for the committee not to adhere too closely to the schedule and deprive a man of his certificate, if he does not register up to 10 o'clock each night. The certificate at the end of the run will be an award of merit, and will serve as an incentive to go on. If, however, some poor unfortunate is prevented for various causes from registering each night at 10 o'clock, he will lose courage and interest—for his chance for a certificate are gone—and he will switch off and abandon the tour. If a man makes the tour from New York or Boston, it certainly seems to me that he should receive a certificate, even if he should be a little late and not exactly on schedule time."

(Recognizing that this or a similar view of the run may be taken by some automobilists, the touring committee states that every effort will be made to impress on all participants the undesirability of driving their machines beyond ordinary speed. The belief is entertained that the high character and sense of sportsmanship of those who have entered and those whose entries have been promised, will insure that the run will be just what has been planned—a pleasure trip for gentlemen. Regarding certificates, it should be appreciated that the committee desires the nightly registration primarily to make sure that the tourists shall regulate their schedules in unison. In cases where tourists, through stress of weather, accident to machines, or any other cause, may be unable to keep with the main body, this fact will certainly not militate against the award of certificates. A tourist need not, if he elects otherwise, follow the exact schedule, or even follow the exact road outlined. But he must not race ahead of the tour, and if he does, he must remain until the registration book is open at the next stop. The closing of the books at 10 o'clock each night is rendered necessary by the need of transporting this official record forward for the next day's run.

It is not generally known that the participation of Mr. and Mrs. Charles J. Glidden, of Boston, in the run will be a link in the chain of touring, which Mr. Glidden is pursuing, in the course of which he will cover the entire globe. Mr. and Mrs. Glidden will leave Boston with the New England division. The suitable months of 6 years will be required to make the journey of 40,000 miles, of which 15,000 miles have been covered to date in sixteen European countries. The party was the first to cross the Arctic circle in an automobile on August 16, 1903, after a 1,540-mile drive, almost directly north in Sweden. They have now been touring the better months of 3 years.

#### MOTOR CYCLE HILL TEST

The motor cycle hill climbing contest which recently took place in St. Paul, Minn., was an interesting competition. It was held on the Sixth street hill, which is 275 yards long, paved with granite blocks. The first half of the hill has a 12 per cent grade, while the other half has an 8 per cent grade with a slight rise at the top. Each contestant was allowed but one trial and a running start of 200 feet. The results were as follows: A. J. McCollum, on an Armac motor cycle, first, in 18.35 seconds; E. W. Keller on an Armac, second, in 23.15 seconds; F. E. Hopkins on a Metz, third, in 27 seconds; G. Orborn on a Thor, fourth, in 35.43 seconds; U. G. Brown, on a Holley, did not finish the climb.

## FOUR-CYLINDER WINTON

### New 1905 Model Already on the Market, Some for Fall Delivery— Cleveland Trade News

Cleveland, June 27.—Although the company is unwilling as yet to give out details of construction, it is understood that the first of the long-promised and much-discussed Winton four-cylinder cars have been completed and are being shipped this week to leading branch stores. Mr. Winton has been driving one of the cars himself for several weeks, and from all appearances it is an exceedingly smooth-running and easily-controlled machine. The Winton people have been very reticent about this car, preferring to wait until it was in shape to deliver the goods and then allow the car to speak for itself.

In spite of the apparently growing tendency toward a vertical engine, the Winton company claims to have disposed of its entire original quota of 800 touring cars for this season and is now at work on another batch to take care of orders. In the neighborhood of 200 of the four-cylinder cars will be built for this year's consumption, and the factory is being prepared for an early and increased output for next year, all of which does not go to bear out the frequently-heard vague rumor that the Winton people have lost prestige and business through holding to the horizontal type of engine.

Ament this subject, the writer recently overheard a proposition for a wager made by a Winton man, who is in as good a position as anyone in the Winton employ to know Mr. Winton's plans and views, to the effect that neither in 1905 nor in 1906 would the Winton people adopt the vertical type of motor.

Otto Koenigslow, the well-known manufacturer of automobiles and automobile parts, has become associated with the Globe Machine & Stampings Co., 970 Hamilton street, and the two interests will be combined. A. Schroeder, who has been at the head of the last mentioned company for some time, was formerly identified with Mr. Koenigslow in the bicycle business. Now they are together again and will make a strong feature of the production of automobile parts and specialties. Mr. Koenigslow had a well-equipped shop for this class of work and has been doing special work for a number of local and out-of-town manufacturers, in addition to turning out standard goods. The Hamilton street factory will be retained and enlarged.

Louis Doering, who formerly conducted an automobile trimming business on Michigan street, has fitted up an establishment at 60 Superior viaduct, where he is doing trimming for several of the leading manufacturers, besides doing repair work for garages and indi-

viduals. The new factory is large and well equipped.

The Chisholm & Phillips Automobile Co. has moved into its magnificent new establishment at 1189 Euclid avenue. The company started work on this store early in the year and it has just been completed. The building is four stories high and is especially designed and arranged for the company's requirements, adding another to Cleveland's already large list of large and well equipped garages.

### ANOTHER CRUSADE STARTED

Boston, June 25.—The police of Boston are to inaugurate another crusade against the automobilists, and the guilty and innocent alike are to be placed to a great deal of inconvenience. On some date, unknown at present, the police are to descend upon the automobilists, hold every one up and see if his license number conforms with the certificate, and also that the machine bearing the number corresponds in every particular with the description furnished. Failing to do this the automobilist is sure to meet with trouble. The police yesterday started off on another tack. One driver was pulled up

## SCRIBES VISIT KNOX CO.

### New England Newspaper Men Entertained by the Waterless People at Springfield, Mass.

Boston, June 24.—Half a hundred of the automobile newspaper writers of the far east, or more, properly speaking, of the leading daily newspapers of New England enjoyed the hospitality of the Knox Automobile Co. on Monday and Tuesday of this week. The newspaper men were carried from their home cities in Knox cars, under the pilotage of the local agents, to Springfield Monday afternoon. The Boston party covered the greatest distance that day, 107 miles.

This party, under pilotage of George G. Reed, of the Reed-Underhill Co., C. R. Culver and J. D. McNichol, left Boston at 8 o'clock in the morning, four of the big touring cars being necessary to carry the pencil-pushers. It was a fine day and a fine trip over good roads and through no end of dust, but everything was conducted in order and the police

had no reason to object to the pace set.

At Marlboro several local newspaper men were picked up, and at Worcester a second aggregation joined the main party. Dinner was enjoyed at Brookfield and the run to Springfield made in short order. Here the party was received by Harry Knox, E. A. Cutler, William E. Wright, A. E. Smith, F. T. Craigie and Mr. Pease.

The party was then divided into squads, and with competent guides made a tour of the factory and saw how great had the little acorn grown



ARRIVAL OF NEWSPAPER MEN AT THE KNOX FACTORY

and questioned as regards the cause of the thick coating of dust on his number plate. With a great deal of pride he said he had placed vaseline on his number plate to collect the dust and thereby prevent identification on the part of the police. This little trick cost him \$10 in court the next day, and he appealed. There is no question that a lot of numbers are being used on machines in this state decidedly contrary to the law, and it is to bring a stop to this practice that the police are about to wage war. Still, while there is some measure of righteousness in their action, there is no denying the fact that as a whole the police are inclined to give the automobilists the worst end of the argument.

### MODEL TO BE SOLD

July 15, at 2 o'clock, Trustee in Bankruptcy Charles M. Brown will sell in the city of Auburn, Ind., to the highest bidder, all the property and estate of the Model Gas Engine Co. This property consists of real estate, buildings, machinery, plant, material, merchandise on hand in the rough, manufactured and in process of manufacture; also all patents, patterns, notes, bills, rights and credits belonging to the bankrupt.

during the past 4 years. The construction of an automobile from the crude material to the up-to-date vehicles was seen in all its stages. The trip was valuable, giving as it did a deeper insight into the automobile industry, and an idea of the vast amount of detail and strict attention to business to be found in such a successful establishment as the Knox. An interesting display was that of samples of every model constructed by the Knox company since the days of the three-wheeler, which saw the light of day in 1900.

The method of testing the cars was likewise displayed, a commercial chassis being the subject. On this was loaded 2,400 pounds of dead weight, and then thirteen good-sized men mounted the load and were driven for several miles over the roads, along the level and up the grades, some of which were heartbreakers. Then came a ride through Forest park, one of the finest city reservations in the country, through which the party dashed at a law-breaking pace, traveling along forbidden roads. That, however, made no difference, as Mr. Wright is the chairman of the park commission of Springfield and he ought to know which were the roads open to the use of motor

vehicles and also the speed restrictions of the same. In the evening the party enjoyed dinner at the Cooley house and later spent the time as inclinations determined. On Monday the tourists returned to their home stations.

The participants on this trip were: W. I. Ralph, Automobile, New York; Harry B. Coker, Boston Post; J. C. Kenison, Motor Age and Boston Herald; L. J. Sweeney, Boston Globe; Henry F. Hosley, New Haven Register; William M. Lathrop, Waterbury Republican; C. J. Sawdy, Sunday Telegram, Waterbury; F. T. Clark, New Haven Times; George B. Henderson, New Haven Register; George B. Hammond, Palladium, New Haven; A. J. Pickett, New Haven Leader; George S. Whittemore, Worcester Post; Robert W. Pratt, Worcester Telegram; George N. Tuohy, Worcester Gazette; C. F. Marden and H. H. Martin, Boston Transcript; J. S. Kitteredge, Lowell Sunday Telegram; William Cogger, Lowell Courier-Citizen; F. E. Dayton, Motor Age; J. J. Donovan, Boston Globe; P. E. J. Dowling, Boston Record and Advertiser; Charles E. Perkins, Middletown Tribune; C. B. King and R. A. Hydenberg, The Penny Press, Middletown, N. Y.; T. P. Bill, Hartford Times; C. L. Fuller, Brockton Enterprise; H. P. Merrill, Springfield Homestead; R. A. Warriner, Springfield Daily News; W. H. Dearden, Springfield Union; A. L. Philbrick, Providence Journal; E. E. Cogswell, Boston Traveler; Harry Jones, Boston Journal; N. S. Beane, Boston Globe; D. J. MacNichol and D. C. Jordan, Shumway Advertising Co.; G. G. Reed, Boston; F. C. Billings, Worcester, Mass.; M. S. Davis, Providence, R. I.; S. A. Miner, Hartford, Conn.; C. H. Torrey, New Haven, Conn.; W. H. Marble, Brockton, Mass.; F. L. Caulkins, Middletown, Conn.; E. E. Fuller, Lowell, Mass.; Thomas Mullen, Brockton, Mass.; E. H. Cutler, H. A. Knox, W. E. Wright, A. E. Smith, H. G. Farr, W. S. Pease, C. R. Culver, J. M. Collins, O. F. Springer, A. P. Chapin A. E. Dennison, M. R. Marsh and E. Hamilton, Springfield, Mass.

#### BATTERY SHOWED WELL

Providence, R. I., June 25.—The ability of the battery which the Rhode Island Electromobile Co. owns to last for a long distance trip was fully demonstrated recently by a successful completion of a run to Boston and back from this city in a runabout on one charge. This battery, it is claimed, is capable of not only holding a great amount of current, but of giving it out without injury. The runabout which went to Boston and back, a distance of 94 miles, was equipped with a 40-cell battery, which lost 3 volts during the outgoing trip. Without stopping in Boston the return trip was commenced, but during the trip the battery did not seem so vigorous on long grades. For about 60 miles an average speed of 15 miles an hour was maintained, and the entire time consumed by the long journey was 7 hours. Eight volts were lost as shown by a test made in Providence. The weight of the 40 cells was 1,160 pounds. Two passengers were carried.

#### BOAT OWNERS TO ORGANIZE

A new feature planned for the summer residents of the Thousand Islands is a motor boat association, to include in its membership all owners of motor boats between Kingston, Ont., and Ogdensburg, N. Y. The advisability of such an organization has been discussed by a number of launch owners and the sentiment is unanimously in favor of the project.

## N. A. A. M. AND A. L. A. M.

### The One Settles the Local Show Matter and the Other Settles the Local Agents' Future

A meeting of local show promoters and representatives of the N. A. A. M. was held in Buffalo, N. Y., last week. The following persons were present: George L. Low of Boston, Mass.; George Collier of Cleveland, O.; William Metzger of Detroit, Mich.; H. D. Le Cato and H. W. Schlichter of Philadelphia, Pa.; F. J. Wagner and D. H. Lewis of Buffalo, N. Y.; B. C. Washington, Jr. of Washington, D. C.; and S. A. Miles, Charles Clifton and M. J. Budlong, representing the N. A. A. M.

It was decided that the association would not require the 10 per cent of the profits made at local shows, as originally planned. A schedule of dates for shows was arranged, which, however, is subject, in the case of local shows, to approval by the executive committee of formal applications for sanctions. The dates selected for the different shows are as follows: New York, January 14-21; Chicago, February 4-11; Detroit, Mich., February 20-25; Cleveland, February 27 to March 4; Buffalo, March 6-11; Boston, March 13-18; Philadelphia, March 20-25, and Washington, March 27 to April 5.

It was unanimously decided by the local show promoters that the N. A. A. M. send a representative, at the expense of the promoters, to each of the local shows. Concerning the allotment of space, it was decided to use the same methods for local shows as will be used for the allotment at the national exhibitions.

At the meeting of the A. L. A. M., which was held at Buffalo, N. Y., last week, no briefly reported in Motor Age, twenty-four concerns engaged in the manufacture of automobiles were represented. The subject principally discussed was that concerning the agent. It was decided that hereafter only dealers actually engaged in selling automobiles would be selected as agents, and that they would receive entire protection against rival agents who, in order to sell cars which they do not handle, would go into other towns to secure such cars.

Sub-agents will be required to sign the association's contract and thus be compelled to observe the regulations of the association.

There was also considerable talk among those present concerning arrangements for next season's business. Some of the manufacturers stated that next year's models would be ready for the agents before the annual shows are held. There will probably be few important changes in the 1905 models, although there will be a considerable increase in the manufacture of four-cylinder cars, which have been in great demand this season.

Three new members were admitted to the Association of Motor and Accessory Manufacturers at a meeting of the board of directors of that organization at the Marlborough hotel, New York, June 23. The organization now has a membership of forty-five, including practically all of the prominent concerns engaged in the manufacture of automobile motors and accessories.

The board of directors, consisting of D. J. Post, Veeder Mfg. Co., president; F. E. Castle, Gray & Davis, secretary; H. W. Chapin, Brown-Lipe Gear Co.; W. S. Gorton, Stand-

ard Welding Co.; L. J. Keck, Badger Brass Mfg. Co., and P. L. Hussey, Hussey Drop Forging & Mfg. Co., held a closed conference, and while plans of considerable importance were discussed, not much was given out concerning them. The members of the board indicated that negotiations with the N. A. A. M. concerning the allotment of suitable space at the shows to the motor and accessory manufacturers were progressing satisfactorily. Another directors' meeting will probably be called for some time in August. The new members admitted were the Detroit Steel Products Co., of Detroit; C. A. Mezger, of New York, and the George R. Taylor Co., of Springfield, Mass.

#### CARRIES THIEVES IN CAR

San Francisco, Cal., June 24.—W. V. Buckner of Haaford, sheriff of Kings county, has done away with the horse and buggy and hunts up outlaws and criminals all over King's, Tulare and Fresno counties in his Hummer car. As a result of this new method of quick traveling the sheriff awoke the capture of a very dangerous convict in Haaford, simply because he managed to get there ahead of the train.

The Country Club of the McCloud river is putting in a splendid thoroughfare from Sims to McCloud resorts, over which automobiles will be used. The roadway will extend from McCloud river down Squaw creek, thence to the mouth of the Hazel creek at Sims. The road has been completed down Squaw creek and surveys are now being made to Sims. The latter portion of the road is now a sort of a horse trail, but it will be widened and put into condition so that vehicles can go over it. During the summer months the millionaires who make their summer homes on the McCloud will run an automobile line over the highway, and expect to put the road in such a condition that some automobile records will be broken.

George A. Pope, E. W. Hopkins, Mose Guss and James L. Flood, all wealthy well known men of this city, who became great automobile enthusiasts only recently, are going to use every possible influence for a better road from San Francisco to San Jose, on this side of the bay.

George A. Aldrich, a well known automobilist of this city, returned a few days ago after a 10 months' trip around the world. Japan, China, Hawaiian Islands, Egypt, Italy, France, Germany and England are some of the countries visited by the traveler, who made a study of the automobile industry while abroad, and also visited many big factories in the east on his way back from New York. Mr. Aldrich said that while he saw some of the greatest French factories which impressed him, he was still more surprised when going through some of the large factories in this country, which in many instances are superb.

Charles Midlin Hammond, brother-in-law of President Roosevelt, accompanied by Mrs. Hammond, B. B. Stanley and William O. Edmonds, started last week in Mr. Hammond's Cadillac for a trip over the mountains to Upper Lake. The party had a delightful trip except during the last 50 miles, when the roads were found to be exceedingly dusty and many grades were met ranging from 12 to 30 per cent. For 6 miles no part of the grade was less than 10 per cent, and from that up to 25 per cent.

# AFFAIRS OF THE CLUBS



THE LADIES' AUTOMOBILE CLUB OF GREAT BRITAIN AT RANELAGH

**Ladies Hold Run.**—The first run of the Ladies' Automobile Club of Great Britain and Ireland took place in London, June 16, and according to English papers was the most interesting automobile event that occurred this year. About sixty cars assembled opposite Carlton House terrace, which is located in one of the finest sections of London. At the start the Duchess of Sutherland took the lead.

The run was to Ranelagh, passing through Pall Mall, which is considered one of the most fashionable streets of the English metropolis; Birdcage Walk, Constitution Hill and Hyde Park. In passing in front of Buckingham palace, the king and queen of England came to the window and witnessed the parade. Some of the prominent women who drove cars were the Duchess of Sutherland, in a 24-horsepower Mercedes; Lady Cecil Scott Montagu, in a 22-horsepower Daimler; Mrs. Gerard Leigh, in a 15-horsepower C. G. V.; Mrs. A. Rawlinson, in a 15-horsepower Darracq; Lady Colville, in a 6½-horsepower de Dion-Bouton; Lady Lonsborough, in a 40-horsepower Panhard; Mrs. E. Manville, in a 14-horsepower Daimler; Lady Brassey, in an electric brougham; Mrs. A. Hall, in a 24-horsepower Wolseley; Mrs. S. F. Edge, in a Napier. Among the guests were some of England's prominent statesmen and military men.

**Hartford Clubs Combine.**—The Hartford Automobile Club and the Automobile Club of Hartford, both of Hartford, Conn., have combined and the new organization is called the Automobile Club of Hartford. J. Howard Morse was elected president, Fred C. Billings vice-president, W. T. Plimpton secretary, A. W. Gilbert treasurer, L. C. Glover chairman of the membership committee, C. E. Walker chairman of runs and tours, L. D. Fisk chairman of the racing committee, C. G. Huntington chairman of the committee on rights and privileges, Joseph Birmingham chairman of the committee on good roads. At the meeting of the club an interesting discussion relative to the speed limit took place and all present were unanimous in urging that the law should be observed by all, and that efforts should be made in a friendly way with the proper authorities to have the speed ordinance changed so that both motorists and the public will be satisfied in every way.

**Saw Where the Cash Goes To.**—Members of the Automobile Club of Columbus, O., and a number of prominent citizens, including Mayor B. Jeffrey, General D. E. Powell and others, were the guests of the National Cash Register Co., of Dayton, O., last Friday.

**Saw "Vivian's Paps."**—Last Saturday's run of members of the Chicago Automobile Club to Evanston was one of the best attended affairs of this season. Several hundred members met at the host house for supper and later on went to "Vivian's Paps" at Powers' theater.

**Down on Scorching.**—At a recent meeting of the Automobile Club of Southern California it was decided to co-operate with the city officials in the enforcement of the new speed ordinance. The secretary will mail to every member of the club a letter outlining the provisions of the new law, explaining its detail and urging compliance with the provisions.

**Will Investigate Fatality.**—President Parsons, of the Chicago Automobile Club, has instructed the attorney for the club, Sidney J. Gorham, to institute an inquiry and ascertain the exact cause of the accident resulting in the death of Mr. and Mrs. George Dixon last Sunday, as reported in another column of this paper. Mr. Dixon was a member of the club.

**Night Parade Scheduled.**—The semi-monthly meeting of the Dayton Automobile Club of Dayton, Ohio, was held last week and fifty members were present. It was decided that a night parade would be arranged for July 2. The committee having charge of the arrangements for the race meeting to be held July 4 reported that matters were getting along very satisfactory and that the meeting would prove to be a success.

**Sam White, President.**—At a meeting of members of the Davenport Automobile Club, of Davenport, Ia., the following seven directors were named: Sam T. White, A. H. Ruebsam, B. L. Schmidt, Dr. A. L. Hagebroeck, W. D. Petersen, F. L. Bills and T. B. Carson, who then elected the following officers: President, Sam T. White; secretary, A. H. Ruebsam; treasurer, B. L. Schmidt. A committee consisting of W. D. Petersen, F. L. Bills and T. B. Carson will arrange articles of incorporation. Committees on membership, executive, auditing, entertainment were also elected.

**Chicagoans Will Tour.**—The Wisconsin tour of the Chicago Automobile Club will be started July 1 at 9 o'clock. It is expected that Waukegan will be reached by 1 o'clock, when lunch will be served. At 2 o'clock the excursionists will start for Milwaukee, where they will probably arrive about 7 o'clock. Dinner will be served at the Pfister hotel. The distance for the first day's run will be 100 miles. Only 45 miles will be run on the second day, Saturday, July 2, the party leaving Milwaukee at 9 o'clock, scheduled to reach Waukegan by noon, spending 4 hours in the locality. At 4 o'clock the start for Oconomowoc will be made, where the motorists are supposed to get by 5:30. They will stop over night at the Arlington hotel and leave for Geneva Lake at 10 in the morning, July 3, in order to reach the resort by noon. This journey is only 35 miles. Monday morning, July 4, at 8 o'clock, the start for home will be made by way of Waukegan, and the Evanston club house is expected to be reached at 6 in the evening, after a run of 75 miles for the day. The automobile clubs of Grand Rapids and Milwaukee have been invited to join the run of the club.

**At Regular Price Now.**—At a meeting of the board of directors of the Chicago Automobile Club Monday it was decided that after July 8 the special promotion committee will be discontinued and that new members received from that date will be charged the full initiation fee of \$25, and dues for the first 6 months will no longer be remitted. It was also decided that a petition be prepared and left at the club house for signature by its members asking the west park board to repair the stretch of boulevard between Western avenue and Douglas park. For nearly a mile the boulevard is torn up and practically impassable for motor cars. A contribution of \$50 was made at the meeting for the New York-Chicago Highway Association to assist in the payment of the publication of the proceedings of the good roads convention, which was held in Erie, Pa., recently. Several club members have also made personal contributions towards defraying the expenses of this good roads campaign.

**Race for Fun.**—The Automobile Club of Los Angeles, Cal., recently adopted a novel way of holding race meets. They are held in the afternoon and run in an informal way, no program being arranged in advance and the start being given only when there are sufficient machines present to make a class. The vehicles are sent off just in the way they arrive at the track and striping is not permitted. There is no intention of having swift races, but merely fun.

**Officials as Members.**—At a meeting of the Automobile Club of Binghamton, Binghamton, N. Y., Mayor S. L. Smith and Chief of Police Moore were elected honorary members. There will be a club run to Cooperstown July 2, 3 and 4. A club emblem was adopted, which consists of an automobile wheel and tire. It bears the initials of the club and the date '04.

**Club Growing.**—Fifteen cars took part in the second club run of this season held a few days ago by the Automobile Club of Indiana. During the first 2 weeks of June twenty-four new members were admitted by the club.

**Club in Prospect.**—The automobile drivers of Bucyrus, O., intend to form an automobile club in the near future.

**Entertained Conventionists**—Members of the Chicago Automobile Club were almost as busy during the convention days as the conventionists themselves. Luncheons, dinners and free rides were all the go for several days. Among those thus entertained were: Governor Van Sant, of Minnesota; Mrs. Shaw, wife of the secretary of the treasury; the Women's Press Club of Canada, and Editor Edward Rosewater, of the Omaha Bee.

**Cheap in Texas**—The Dallas Automobile Club was organized in Dallas, Tex., last Thursday. The following officers were elected to serve during the first year: President, John G. Hunter; vice president, E. J. Kiest; secretary, G. C. Scruggs; treasurer, J. D. Scofield; manager and director, Henry Garrett. A committee consisting of Messrs. Leachman, Morgan and Dreeben was appointed to draft by-laws. The membership fee will be \$2 and there will be annual dues of \$3. The club started with a membership of eighteen.

**Suburban Retreat**—Last Saturday members of the Louisville Automobile Club, of Louisville, Ky., were entertained at the country home of one of their members, Clarence Gardner, near Jacob park. The surrounding country was considered so beautiful that a committee of three members was appointed to draw up plans for a country club house to be built on Manlick road. One of the most enthusiastic members has donated the grounds needed. Provisions will be made for the construction of a mile track near the club house. Another committee was also appointed by the club to offer to the superintendent of the Flower Mission the use of the cars of members, from time to time, to take convalescent patients through the parks.

**Subscribe for Track**—A subscription has been started among members of the Berkshire Automobile Club of Pittsfield, Mass., for the purpose of raising from \$250 to \$300 in order to make improvements to the Pleasure Park, so that races and competitions of different kinds may be held there. The park has been placed at the disposal of the club, and its members seem enthusiastic over the matter. The track will be elevated, leveled and rolled. The curves will be entirely remodeled and after the work of improving has been completed it is expected some fast riding will be possible. It is planned at present to charge a small admission fee, including transportation from the trolley cars to the grounds by the automobilists on the days when there will be races.

**Want Road Rules Observed**—C. L. Boyle, Fred Huttig and H. N. Strait were appointed as a committee by the board of directors of the Automobile Club of Kansas City to discuss with the aldermen of the city the proposed automobile ordinance. The ordinance stipulates a speed limit of 8 miles an hour, while the members of the club are trying to have the limit raised to 12 miles an hour. Speaking about the complaints concerning motorists, Secretary Dobbins of the club said: "If the drivers of horses observe the common road laws there will not be such complaints against automobiles. The owners of horse-drawn vehicles take the right, center and left of the boulevards and streets at will, while the automobilist has to zigzag through them at his own peril as well as that of those driving animals. We shall ask the council to enforce the law keeping vehicles to the right of the road and when passing going in the same direction do so on the left."

## MOTOR LEGISLATION

**Shut Out Automobiles**—The board of park commissioners of St. Paul, Minn., decided last week that automobiles are not to be allowed on the river drive between Summit and Marshall avenues. The step taken by these officials has created much astonishment, inasmuch as the board decided a few weeks ago that motor cars may be run on that part of the drive. There was a lively discussion concerning the matter at the meeting of the three board members, in which President Wheelock took the motorists' side. In answer to Commissioner Aberle's contention that he thought the time had not yet come when the horses of the city are sufficiently acquainted with motor cars and do not become frightened, President Wheelock replied by saying that most horses become frightened not on account of the automobile itself but on account of the headlights on the machines. He suggested that the restriction be limited to night time only. "It is unjust to deprive automobilists of the use of the drive, because they constitute a large proportion of the users of the highways. Furthermore, it has not been proven that they are the cause of most automobile accidents. One important cause of accidents, or horses being scared, is the poor lighting of many important streets and avenues. To remedy this condition will mean a great deal in avoiding accidents." The vote upon the motion then followed and was two to one, the latter being that of the president. A resolution presented by him was then passed and directs the board of public works to have better light service on the drive between Summit and Marshall avenues, and suggested that twelve incandescent lamps be located on that part of the river drive.

**Strictly Severe**—The city council of Atlanta, Ga., passed an ordinance regulating the running of automobiles. Within the fire limits a speed of 8 miles an hour is permitted, which may be increased to 15 miles an hour in other parts of the city. An automobilist must secure a license, which will cost \$1, and must be renewed every year. Numbers 4 inches high and 2 inches wide must be displayed on the car, which must be registered with the city clerk. Violators of the ordinance may be punished with imprisonment not longer than 20 days or a fine which may amount to \$100.

**Ten Miles in Chicago**—The judiciary committee of the city council of Chicago, at a meeting held June 24, recommended that a speed of 10 miles be permitted for automobiles. This is 2 miles faster than the present regulation. The new ordinance also provides for a board of automobile registry, which is to furnish numbers for all motor cars upon payment of a fee of \$1. On the rear of every car there must be a red light at sunset and a white light must shine on the number so that it can be easily identified. Offenders may be punished with a fine of from \$5 to \$25.

**Missouri Again**—The board of park commissioners of Kansas City, Mo., has directed its secretary to prepare an ordinance stipulating that the speed of automobiles in the parks must not be greater than 8 miles an hour.

**Not Transferable**—State's Attorney Donahower, of St. Paul, Minn., recently gave an opinion whereby an automobile license cannot be conveyed with the machine itself from one owner to another.

**Mayor Gives Warning**—Mayor Longstretch, of Merchantville, N. J., has issued an order warning automobilists that the speed at which they may drive their cars through the town is 8 miles an hour.

**Where Is Pratt City?**—At the recent semi-monthly meeting of the mayor and aldermen of Pratt City, Ala., an automobile ordinance was passed which makes it a misdemeanor to drive an automobile faster than 6 miles an hour within the city limits.

**Takes Figuring**—According to the state law of Pennsylvania automobiles must not be run at a greater speed than 8 miles an hour within the limits of cities and boroughs; outside of the corporate limits the speed must not exceed 1 mile in 3 minutes. At sharp turns, street crossings, on the approach of any person or team the speed must be reduced to 1 mile in 6 minutes.

**Six Per in Northfield**—Motorists must not drive their cars faster than 6 miles an hour in the village of Northfield, N. H., but may go as fast as 10 miles an hour outside the limits of the village. Whether in the village or on roads within the limits of the village, it will be necessary for an automobilist to come to a stop when meeting a team, if the driver of the latter requests it.

**Judged by Candlepower**—Sterling, Ill., has also adopted an automobile ordinance. It is a little different from the others from the fact that all motor cars must be equipped with two 25-candlepower lights. The speed permitted is 8 miles an hour and "chafers" must stop their cars if horses show signs of being frightened. It is also required that only competent people can use automobiles. The punishment for offenders will be a fine from \$3 to \$200.

**Pretty Slow**—An ordinance is to be introduced at a meeting of the city council of Pittsburgh, Pa., whereby automobile owners will have to pay a fee, the amount of which will probably be fixed according to the power of the car. The speed limits will be 8 miles an hour in the business districts and 12 miles an hour in other sections. It is said that the officers of the automobile club, which have been consulted concerning the new ordinance, are in favor of it.

**Huron's Restrictions**—An automobile ordinance was passed by the common council of Port Huron, Mich., a few days ago and permits motorists to drive at a speed of 8 miles an hour in the business section of the town and 12 miles an hour outside of that section. No person under 16 years of age will be allowed to operate an automobile on the streets. Owners of automobiles must register with the city clerk, giving a description of the machine, residence, etc. The clerk will furnish one or more illuminated figures 4 inches high and 3 inches in width at a cost of \$1. The owner of the automobile must put these figures on the rear of the vehicle or on the rear axle. An automobile, after dark, must carry two lights, one on each side, of at least 4 candle-power to be set in front of a reflector. On the face of the lamps must be painted the number of the license, 1 inch in size. Any person while driving an automobile on the streets must keep on the right side. Any person violating the provisions of the ordinance will be punished by a fine not exceeding \$100, and in default of the payment of such fine the offender will be imprisoned in the county jail for a period not exceeding 3 months.



# THE READERS' CLEARING HOUSE

## GRADE CLIMBING ABILITY

Cincinnati, O.—Editor MOTOR AGE—How can the possible speed in miles per hour on a certain gradient be determined when the horsepower of the car and its load are known?—J. G. L.

Assume a car weighing 1,000 pounds, carrying a load of 500 pounds, and equipped with an 8-horsepower motor, and an one in ten grade. Then, referring to the illustration,

$$\text{Tangent } O = \frac{1}{10} = .1$$

The angle  $O$  will be the  $5^\circ 42'$ . In small angles, the sine and tangent being nearly equal, it may be assumed to be equal. The perpendicular  $1$  is the height the total load must be lifted in traversing the distance  $10$ . The resistance due to elevating a distance  $1$  will be

$$\frac{\text{Load} \times \text{tangent } O}{1500 \times .1} = 150 \text{ pounds}$$

On level roads the tractive resistance with pneumatic tires is about 47 pounds per ton, or, in this case,

$$\frac{47 \text{ pounds (1,500)}}{2,000} = 35 \text{ pounds}$$

The total resistance will then be  $35 + 150$ , or 185 pounds, in ascending this grade. With an 8-horsepower motor and a transmission efficiency of 75 per cent the road wheel work per hour is

$8 \times .75 \times 33000 \times 60$   
or 11,880,000 foot pounds per hour, where 8 is the horsepower, .75 the efficiency, 33,000 the equivalent of 1 horsepower in foot pounds per minute, and 60 the number of minutes in an hour.

There being 5280 feet in a mile and the number of miles per hour being taken as  $N$ , then

$$N = \frac{11,880,000}{185 \times 5280} = 12.1$$

## TROUBLE IN STARTING

Susquehanna, Pa.—Editor MOTOR AGE—I have a runabout fitted with an 8-horsepower, single-cylinder motor. Sometimes it gives me much trouble by not starting as soon as it should; sometimes it will start by cranking a few turns, and then again it will not start with a large number of turns. The last time I was out I had to stop for some repairs, and when ready to go could not start the motor. I cranked for nearly a half hour and, finally, being on a short hill, I turned the machine around, put it in the high gear, and got a fellow to push it. I was in the car, and it only ran about 50 feet before it commenced to go. Can you give me any idea why it takes so much cranking before it starts? The sparking device is all right.—E. W. JACKSON.

Assuming the battery and ignition apparatus is all right and that after once started the motor continues in operation and seems to produce its usual power, the trouble is with the mixture. Some carburetors flood at low speeds and sputter after stopping, which makes it necessary to pump all the raw gaso-

line out of the carburetor before the motor will start. Attach a drain cock so that the aspirating or mixing chamber can be drained before starting. If, upon opening the cock, gasoline runs out this is the trouble. The same result may be caused by insufficient suction on the gasoline. If for this reason, see that all joints in the line between the carburetor and the motor are tight, and then nearly close the air inlet to the carburetor while turning over the motor. If this makes the motor start it shows insufficient gasoline feed, which can be remedied by injecting gasoline into the carburetor just before starting.

## MOTOR MIS-FIRING

Akron, O.—Editor MOTOR AGE—I have a two-cycle engine which mis-fires at high speed. The ignition seems to be all right and sparks regularly. Can you tell me how to remedy this trouble?—C. J. K.

Most two-cycle motors do not operate well at high speeds. If the ignition apparatus is in perfect condition the trouble is either with the vaporizer or in the general design of the motor. A mis-fire usually is caused by a weak mixture. It may be possible to arrange to supply more gasoline at high speeds. If at high speeds the exhaust contains black smoke it shows that the motor is receiving too much gasoline. Have the crank case inlet of good size so as not to throttle at high speeds. If a throttle is used it should be placed in the transfer port between the base and the cylinder.

## BATTERY WEAKENING

Buffalo, N. Y.—Editor MOTOR AGE—The storage batteries on my car run down after a continuous run of 8 hours, but pick up again over night. What is the cause and how can this be remedied?—D. L. C.

Some storage batteries seem to possess this recuperating property, which cannot readily be explained without entering into the chemical reaction in the cell. Primarily the cause is this—when the cell is not working one plate gives back to the other some of the chemicals that it has taken from it while being used; this accounts for the recuperation. This battery condition can only be remedied by the manufacturers of the battery.

## SIZE OF SPARK

Providence, R. I.—Editor MOTOR AGE—Is a mere spark all that is essential in an explosive motor, or does its size materially effect the power?—C. P. S.

The hotter the spark the more rapid is the combustion. The explosive engine depends

upon rapid combustion for its efficiency and power. Ignition, or, more properly, combustion, is not instantaneous. The element of time is relatively small, but considered in connection with the piston travel at high speed, it is quite appreciable. Imagine a body of water 10 feet in diameter. A pebble and rock dropped in the center from the same elevation strike at the same time, producing concentric ripples, emanating from the point of contact. The length of time taken by the first ripple of each to reach the outside may be compared to the difference in effect of a weak and a hot spark in an engine cylinder. Undoubtedly two plugs would assist the ignition, but as one usually gives sufficient trouble it will hardly be adopted.

## CROSS-COUNTRY EXPERIENCE

Du Quoin, Ill.—Editor MOTOR AGE—Having just returned from a trip over the country from St. Louis, Mo., to Marion, Ill., I relate my experience, as it might be of benefit to other readers who may have such a trip ahead and no experience.

I left St. Louis about 10:30 in the morning and went by the way of Belleville. The roads were "fierce," being freshly covered with crushed granite. At Belleville I found my engine to be very hot and found the hose leading from the water tank stopped up with an old gasket. Aside from this all was well, but about that time it began to rain so we remained over night and left early next morning.

A good many prospective car buyers have an idea that in such a case as mud or bad roads the automobile is helpless, and with some it may be, but I came on just the same with the assistance of some  $\frac{1}{2}$ -inch rope on my rear wheels. Of course, it was slow speed most all the way, but the automobile came on the same as any other vehicle would have done and delivered the car to its new owner, C. F. Brock, of this city. The freight rates are so high he engaged me to run it through for him, which saved him about \$15. I then left here with another car and delivered it to Marion. I had no trouble, except one puncture, which delayed me about half an hour. I went 40 miles in the actual running time of 3 hours. The machine was a Model E Rambler.

I have noted a number of complaints about farmers being bitter against automobiles, but I think from my experience it has all been brought about by some of the persons who get a leather cap and a pair of eye-shields on and seem to think they are "it," should be noticed, and should get all the road at all times. Instead of slowing up when they see a farmer coming with his team, they drive on, and the more the horses lunge and pitch the better they enjoy it. The consequence is a bitter feeling against the next automobilist the farmer meets. Out of all my driving I have yet to meet the first farmer to abuse me. When I see I am going to meet a team I always slow up so I can stop my machine in an instant, and if I see the horses are going to be scared

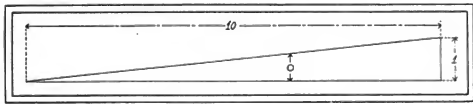
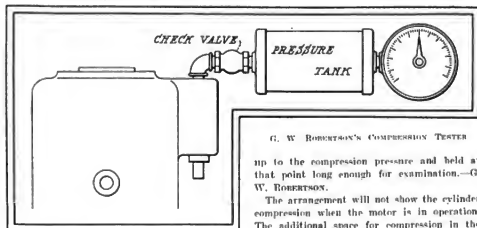


DIAGRAM OF HILL CLIMBING CALCULATION



G. W. ROBERTSON'S COMPRESSION TESTER

up to the compression pressure and held at that point long enough for examination.—G. W. ROBERTSON.

The arrangement will not show the cylinder compression when the motor is in operation. The additional space for compression in the pipe line, valve and receiving chamber would reduce the compression by increasing the compression space, beyond that of the motor when in operation. On a small motor the error would be great. Knowing the bore and stroke of the motor and the total volume in the added parts, the exact compression can be computed from the gauge pressure. When used relatively to test the compression from time to time the device is all right, but for absolute values a calculation must be made.

#### SILENT SPEED CHANGE

St. Louis, Mo.—Editor *MOTOR AGE*.—By a rather simple arrangement I have been able to obviate the oral and mechanical jar produced by sliding the gears in the transmission when changing speed. A simple friction arm faced with leather was attached to the clutch pedal so that just after completely disengaging the clutch, the further movement brought this brake in contact with the male portion of the clutch. This checks the momentum of the transmission counter shaft and gears so that nine times out of ten I can change speed with ease and silence. Possibly other readers can attach the same improvement to their cars.—M. B.

#### MOTOR OVERHEATING

Boston.—Editor *MOTOR AGE*.—I have a four-cylinder car fitted with a cellular or honey comb radiator. The motor heats badly. Can you advise anything to overcome this?—J. C. F.

The trouble may be caused by loss of water; imperfect lubrication; continued driving on low gear; driving with open throttle and retarded spark; or insufficient radiation. The

last cannot be remedied. See that there are no leaks in the circulating system and that a sufficient quantity of oil is fed to the cylinders. Also determine when the water and oil pumps are operating. Keep the water tank filled. Flush out all oil pipes from the source of supply to the delivery with kerosene. Never allow the motor to race unless necessary. Operate the car on the high gear when possible, keeping the throttle nearly closed and the spark advanced. The result will be economical running, and a reserve of power.

#### TERMINAL INSULATION

Racine, Wis.—Editor *MOTOR AGE*.—Will you kindly state in *MOTOR AGE* how heavy the insulation should be for the secondary terminals in the multiple-cylinder commutator shown in the issue of May 26, using hard rubber as the insulating material?—E. C. JONES.

Allow  $\frac{1}{2}$ -inch thickness for the rubber insulation. The outside shell is made up of rubber rings of  $3\frac{1}{2}$ -inch inside diameter and of  $4\frac{1}{2}$ -inch outside diameter, held together by bolts which are spaced between the cylinder plug terminals. Cover each disk with shellac before bolting them together. Cut the disk a trifle large on the outside and a trifle small on the inside, so that after bolting, the shell may be turned outside and inside. Hard rubber is preferable to fiber, as the latter will absorb moisture, swell and warp. If the inside width between the two caps is  $1\frac{1}{4}$  inches, it will be well insulated. A  $\frac{1}{2}$ -inch air space between the metallic parts of the distributing arm, or  $\frac{1}{4}$ -inch of rubber, will be ample.

#### COMPRESSION SPACE

Portland, Me.—Editor *MOTOR AGE*.—In practice how is the cylinder compression space determined? Is the compression considered to be adiabatic?—E. W. J.

The compression volume is determined by calculation and is considered adiabatic. The volume calculated when the piston is at the inner end of the stroke, added to the volume of the exhaust and inlet chambers, constitutes the compression space. It is usually compared by the ratio between the above space and the volume passed through by the piston, plus this space, not considering friction or wire drawing, these being eliminated by suitable valves and conduits. A safe proportion would be to allow a volume above the piston at the inner stroke, equivalent to 28 per cent of the volume displaced by the piston.

I run out as far to the side as possible; and, if need be, stop the engine and get out and lead the team by. Of course, it is often very funny to the motorist to meet a wagon load of people and see them actually jump out, but his place is to stop to do all he can to show them that he regards their rights.

The automobilist should always be ready to answer the questions of the farmer, even though they may be many and elementary. It is not a bad thing once in awhile to give a farmer a ride. A little compromising on both sides will do much toward getting the farmer to join hands with the automobilist on the good roads cause.—H. W. KOEHLER.

#### THERMAL CIRCULATION

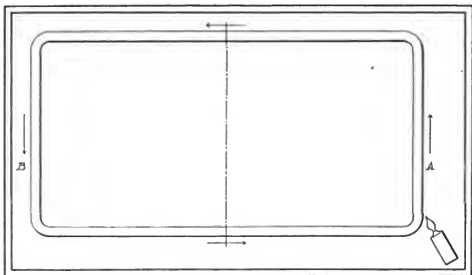
Madison, Wis.—Editor *MOTOR AGE*.—What is thermo-siphon circulation and what points should be observed in its installation?—B. C. W.

Hot water weighs less per volume than cold water. For that reason if an endless glass tube be filled with water containing carbon in suspension and heated at A, a circulation will be noted in the water, in the direction of the arrows. This property is called convection. In applying to a car it should be observed, first, that a large volume of water is used, and, second, that the water tank bottom is above the level of the water jacket bottom. From the tank the pipe leads to the bottom of the cylinder, and from the top of the cylinder to the top of the radiator, which should be as large as possible and preferably a part of the water tank. The hot water cooled in the radiator is returned to the tank by the action of the hot water in the jackets forcing it to the supply tank. Referring again to the figure, and especially to the vertical ends A and B, before heat is applied the weight of water in A and B are equal. When A is heated its volume increases so that the weight of water in B is greater than in A. Naturally the water in B falls and creates a circulation, the same as a beam balance when placed out of equilibrium by a weight on one side only.

#### TESTING COMPRESSION

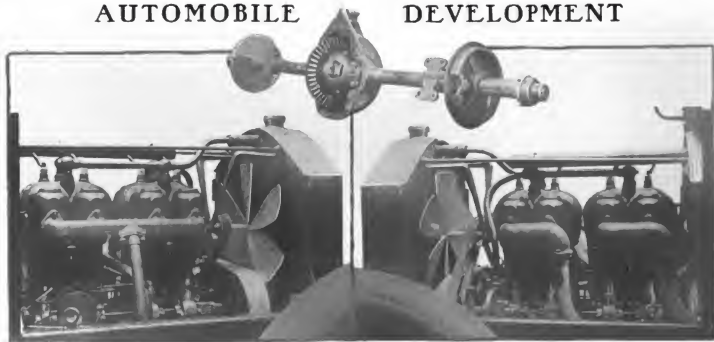
Mt. Vernon, Ind.—Editor *MOTOR AGE*.—In a recent issue, of *MOTOR AGE*, P. W. B. of Pittsburg, Pa., asked how to test motor compression. The accompanying sketch shows a device I have tried: it may be of interest to automobilists generally. It consists simply of a small air-tight tank and a check valve, with  $1\frac{1}{2}$ -inch pipe connection to the spark plug orifice, and carrying a small pressure gauge as shown.

By turning the motor rapidly for a short time the pressure in the tank will be pumped



ILLUSTRATING THE PRINCIPLE OF THERMO-SIPHON CIRCULATION

# AUTOMOBILE DEVELOPMENT



INLET SIDE OF THE METEOR MOTOR

THE REAR AXLE CONSTRUCTION

EXHAUST SIDE OF THE METEOR MOTOR

## SIPHON WATER PUMP

C. W. Carrier, of Desplaines, Ill., is introducing a water pump which is applicable to gasoline engine water-cooling systems in both automobiles and motor boats. It consists of two cylinders cast together, two piston rods, two piston heads, two valves, and one cross-head. The water intake is at the forward end of the upper cylinder. The water then passes through the upper cylinder, through the rear head, into the lower cylinder, and escapes through the outlet at the forward end of the lower cylinder. By this arrangement, a continuous flow of water is maintained, since one valve acts as a check for the other. The valve on the upper piston is on the rear side of the piston head and the valve on the lower piston is on the forward side of the piston head. As the double piston is forced into the cylinders, the upper one closed and the lower opened and vice versa, the one acting as a suction and the other as a force. By this construction of the valves, the water is allowed to circulate while the pump is not in motion, an unusual feature in pumps.

The pump can be driven by eccentric crank, or in any usual way. The complete pump weighs but 4 pounds. The outside dimensions are 2 by 3½ by 8 inches. The bore is 1½ inches, stroke, 4 inches, or less if desired. It can be run from 50 to 300 revolutions per minute. This gives it approximately a capacity of 2 to 15 gallons per minute.

## NEW LIGHT BERG CAR

The Federal Mfg. Co., of Cleveland, O., is manufacturing for the Berg Automobile Co., of New York, a new light touring car, to be known as the Meteor. The first lot of 100 of these cars is now coming through the factory and a number of them are nearly ready for shipment. The day the MOTOR AGE representative called none of the bodies had been finished, hence it is impossible at this time to show a view of the finished car. The mechanical details, however, show a number of interesting features. With the body the car will weigh 1,700 pounds. It has a 91-inch wheel base, and is fitted with 36-inch artillery wheels with 3½-inch clincher tires. The

frame is a 4-inch Federal pressed steel, and the mechanism rests on a pressed steel sub-frame.

The engine is of the four-cylinder type, with cylinders cast in pairs, and is located in front. The cylinders are 3¼ by 4½ inches. The engine is designed to run from 200 to 1,000 revolutions and develops 18 horsepower. The valves are mechanically operated by means of two cam shafts, one on each side, which are operated through fibre gears from the crank shaft. The spark plugs are in the center of the heads and the cables pass through a carbon tube. The circuit breaker is operated from a cam shaft by means of a spiral gear, and the spark is advanced independently of the throttle by means of a lever on the steering wheel.

The cam shaft on the intake side has an automatic governor, which regulates the amount of mixture, according to the speed, by means of a slide-valve throttle. The throttle is also controlled by means of a lever on the steering wheel, or the engine may be accelerated by means of a foot pedal, each device being independent of the other, but all operating the same

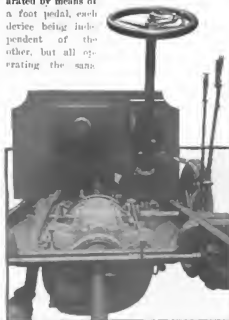
throttle and giving almost perfect control. The carburetor is of the de Dietrich float-feed type, and the process of mixing is aided by a small amount of heat taken from the exhaust line on the other side and carried between the two pairs of cylinders.

A centrifugal water pump is gear-driven from one of the cam shafts, and a cooling fan for the radiator is belt driven from the pump shaft. The radiator is of the Whitlock honey-comb type. The oiling system is of the Jepsen type, and the lubricant is forced to all working parts by exhaust pressure through a sight feed on the dash.

Transmission is of the sliding gear pattern, and with three speeds forward and reverse are effected through a single lever, drive being direct on the high speed. There is a single universal point on the propeller shaft, a hand brake on the shaft operated by a foot pedal, and the act of setting the brake disengages the clutch. A hand lever also sets the brake and disengages the clutch. Expansion brakes on the rear axle are coupled in connection with the brake on the propeller shaft. A tin pan extends under the motor and gears, being built in sections and may be taken apart by removing thumb screws.

A great deal of aluminum is used in the construction of the engine and the weight complete is only 314 pounds. The lower half of the crank casting can be removed without disturbing the balance of the machine and it is possible to remove the cranks and pistons in this way. Each cam is a separate pocket. The cam shafts are forged in four sections and electrically welded and then hardened and ground.

There are centrifugal ring oilers on the wrists and the oil is fed direct through the hollow wrist into the bearings. The exhaust and inlet valves are hardened in oil and ground and are made interchangeable. The connecting rods and piston pins are case hardened, no bushings being used. No bronze bushings are used in the transmission parts. The shafts are all 50 per cent carbon steel, oil tempered, and provided with ring oilers. The cranks and a number of other drop forged parts are recessed to reduce the weight. The



BACK OF THE METEOR DASHBOARD

straight gears are produced on a Fellows gear shaper. Bevel gears are slotted on a Gould & Eberhard slotter and then planed for bevels on a Glenson planer; all gears are 50 per cent carbon steel tempered in oil. All of the wheels have plain bearings, using cast iron bushings on hardened steel shafts.

A very complete testing outfit has been installed for testing Berg and Meteor engines. The engines are mounted on fixtures which rest on stone foundations, and after being thoroughly tested without load are coupled direct by their own clutch to a generator, which is mounted on a track and can be used for any one of three engines. The engines are given a full load test for 5 hours and are expected to develop 20 horsepower. The current generated is turned into a bank of 32 candlepower lamps. The inspector has a curve sheet showing the efficiency of the generator at various speeds and the efficiency of the engine is determined by multiplying the current pressure by the quantity of current and adding the internal losses in the generator.

The Meteor car and a number of the shop appliances mentioned were designed by J. O. Henslot, who was formerly designer for the Berg company, and is now in charge of the work for the Federal company. Since the first of the year, when the Federal company took up the Berg work, it has turned out about fifty of the 24-horsepower chain-drive cars and is at work on more of the same type. The output of Meteors this season will probably be 100. Half of the old ball and pedal plant of the Federal company is given up to the Berg work and about 200 men are busy at the present time.

#### TRADE LITERATURE

H. F. Borbin & Co., 2108 North Ninth street, St. Louis, Mo., have issued bargain circulars of automobile running gears and bodies and second-hand cars. There are several attractive offers of running gears with bodies ready for motors and transmission.

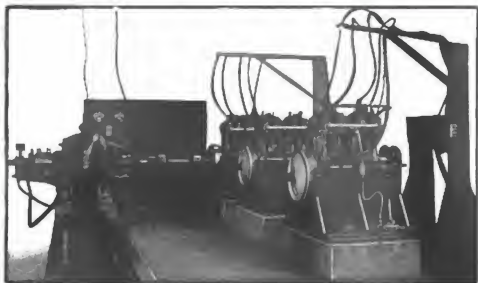
Both manufacturers and automobile users tell of their respective experiences with Goodyear detachable tires in a little booklet. As Others See Us, issued by the Goodyear Tire & Rubber Co., of Akron, O.

The Jersey Brake Co., of Newark, N. J., describes its full line of Scaris automobile jacks in a new catalogue.

The application of Veeder odometers to different makes of cars is described and illustrated in a booklet issued by the Veeder Mfg. Co., of Hartford, Conn.

The Garvin Machine Co., of New York, has issued its new booklet descriptive of machine tools which it makes.

The Michigan Automobile Co., Ltd., of Kalamazoo, Mich., has issued a catalogue describing comprehensively the



TESTING METEOR MOTORS BEFORE PLACING IN CARS

new two-cylinder touring-runabout, or light touring car, which the company has just placed on the market.

If one wants to know what the Auto-Sparker is, what it does and how it does what it does, he will find the answers in the little booklet which has just been issued by the Mullinger Device Mfg. Co., of Pendleton, Ind. The booklet is not only descriptive of the auto-sparker, but shows clearly its application to different styles of engines, stationary, marine and automobile. It is a good example of straightforward trade literature in which pure descriptive matter replaces the elaborate rhetoric which is much too common.

The Standard Carring Lamp Co., 43 South Canal St., Chicago, has issued a circular descriptive of its new Pilot and X-Ray acetylene headlights.

Automobile catalogues for 1904 have shown as marked an improvement in catalogue making as there has been in automobile making, and another one of the several typographically and artistically high-grade booklets of the trade is the new Oldsmobile catalogue issued by the Olds Motor Works, of Detroit, Mich. The half-tone picturing is especially excellent. Of course the new touring runabout and light tonneau Olds cars are prominently displayed in the booklet.

#### POPE-TOLEDO RACER

The Pope-Toledo racer, built for Orlando Weber, of Chicago and Milwaukee, western agent for the Pope cars, is the first venture of the Pope Motor Car Co. into the racing field. The degree of success of its debut into this branch will be determined in the Vanderbilt cup race, if not before on the track.



JOHN T. FISHER ON THE NEW POPE-TOLEDO RACER

The car, with John T. Fisher, its prospective driver, aboard, is shown in the accompanying illustration, which gives a very good idea of its large size and unusually high bonnet. The car is upon regular Pope-Toledo touring car lines of construction, the chief distinction being the 60-horsepower, 6 by 7 inch, four-cylinder motor, instead of the usual 24-horsepower motor. Even the motor is similar to the regular motor, however, except in size, and the car has a three-speed and reverse sliding gear transmission, which also emulates its corresponding factor in the touring car.

Two sets of wheels are provided, of 34 and 36 inch diameter, respectively, it being the intention to equip the car with a regular touring body as well as with the racing body, in which case the large wheels are used to give greater clearance.

#### CONVENIENT VULCANIZER

Vulcanizing has long been recognized as the surest way of repairing injured tires of both the pneumatic and cushion, or even solid, variety, and as the only satisfactory method of fixing some kinds of tire damage. It is ordinarily considered as a repair-shop process, however, the usual equipment for the work being somewhat extensive.

The Stitch-in-Time Vulcanizer Co., of Topeka, Kan., is introducing a small vulcanizer which is adaptable to use by the unskilled and which is small enough to be carried in the vehicle in order to make possible roadside tire repairs by vulcanization. It comprises a small alcohol lamp which is in the base of a vulcanizer body or clamping piece, formed to approximately fit the tread of a tire. Side arms from this body and an adjustable wire clamp allow the vulcanizer to be clamped to a tire which is on the wheel, the clamping wire, which is U-shape, being passed around the rim of the wheel. The device is fitted with a thermometer, by which the degree of heat may be determined, and with a flame regulator to maintain the heat practically constant at the desired point during the period of vulcanization. The whole device in iron weighs 5 pounds and in aluminum 3 pounds. It will cover a spot 2½ by 3½ inches on tires up to 4½ inches in diameter. It is claimed that it will accomplish satisfactory vulcanizing even in the hands of novices and that it is readily adaptable to all ordinary repairs.

# AUTOMOBILE

# TIRE MAKING

**T**HE trees from which rubber sap is obtained are found in the torrid zone.

There are vast forests of rubber trees in portions of South America, but difficulties attendant upon getting the rubber to the market are great. The natives are "grab-staked" by brokers, located at seaport towns. The climate in the interior is very unhealthy, and the mortality consequently great. As many of the natives who have been equipped by the brokers never return, and as those that are successful can, at best, bring but a small quantity of rubber, the market price of rubber must necessarily be high. An idea of the difficulty of getting the rubber to the market can be gathered from the fact that it is brought from the interior down small streams, in canoes, the average length of such canoe trips being greater than the length of the Mississippi river.

The natives tap the rubber trees in much the same manner as maple trees are tapped in the United States, and the sap is gathered into large vats. The end of a long pole is then dipped into the vat of gummy sap and passed through the smoke of a smouldering fire until the sap coagulates. This fire is built from palm nuts, the smoke of which has peculiar qualities that affect the proper curing of the rubber. This operation is repeated many times, until a large ball of rubber is collected at the end of the pole, made up of hundreds of thin layers of rubber. The ball of rubber is then cut open and the pole removed. These halves are commonly called "rubber biscuits."

The first operation in the rubber factory is to place these biscuits in large vats of hot water, where they are soaked for many hours, to slightly soften the rubber to facilitate working it. The biscuits then go to the washing machines, which are made of two large rolls, spirally corrugated, between which the rubber is passed many times, with water constantly dripping on it. This operation removes all



RUBBER STOCK IN THE DRYING ROOM

**EDITOR'S NOTE.** The processes and methods described in this article are based on the practice of the G & J Tire Co., of Indianapolis, Ind.

grit and dirt from the rubber and puts it into the form of long, thin sheets, tough and vibrant. The spiral corrugations of the rolls give the rubber a pebbled, porous appearance, exposing the greatest possible surface to the air.

The sheets of rubber are now sent to the dry room, where a temperature equivalent to normal summer heat is constantly maintained. The rubber is there hung over poles for several months, until every vestige of moisture has evaporated. To obtain proper results, it is necessary to carry at all times an immense quantity of crude rubber, in order to maintain an ample supply of well dried stock.

Heat alone will not vulcanize rubber. It is necessary to add sulphur, which, when subjected to heat, produces a sulphuric gas, effecting what is termed vulcanization, giving the rubber the required body and fiber.

In addition to sulphur, other ingredients are frequently necessary, these ingredients being varied in accordance with the purpose for which the rubber is to be used. In the compounding department, exact amounts of rubber, sulphur, and the other necessary materials are measured out and the "batch," as it is termed, is sent to the mixing mills.

The mixing mills are large, smooth-surfaced rolls, which may be heated with steam, or cooled with water, at will. The rubber is worked between these rolls until it becomes soft and tacky, when the other ingredients are added, and the mixing, or kneading, process is continued until a perfect distribution of the materials has been effected.

Calendering is the next process to which the rubber is subjected. Two types of calendars are used. The stock calendars are used for sheeting the rubber to any predetermined thickness, these calendars being equipped with circular knives, which cut the stock to any desired width.

The friction calendars are used to coat the



ROWS OF ROLLERS SHAPED VULCANIZERS



CUTTING THE FABRIC FOR TIRES



THE TIRE MAKING DEPARTMENT



A ROW OF MIXING MILLS



TELESCOPING INNER TUBE ENDS



THE EXTENSIVE PRESS ROOM



ONE OF THE STOCK CALENDARS



WASHER RAW RUBBER READY FOR THE DRYING ROOM



ONE HALF OF A RUBBER "HONEYCOMB" AFTER IT HAS BEEN CUT IN TWO AND REMOVED FROM THE STOCK OR CORE



FABRIC IN THE STOCK ROOM

fabric with rubber and to force the meshes of the fabric full of rubber, producing what is technically termed "frictioned fabric." This is done by passing a roll of fabric between the rolls of the calendars, crude rubber being worked thoroughly into the meshes.

The rubber in the meshes of the fabric, produced by frictioning, acts as rivets in uniting the several layers of fabric in the complete tire, making the entire construction one firm piece.

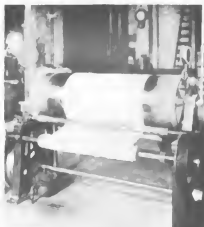
Bicycle tires are built on a flat-surfaced steel drum, having grooves turned in its face, in which the edges or beads of the clincher-fastened outer casings are formed. The rubber tread is first placed on the drum with reinforced center thread. The fabric is next applied, then the clinchers are built in place. The tires are then wrapped firmly to the metal drums with dampened cloth wrappings. About forty of the tires are placed on a truck, which is run into one of the large boiler-shaped vulcanizers, the door closed and bolted, and live steam turned into the vulcanizer. By this method the tires are cured in the moist steam. This process is known as the "open cure," and produces a rubber that is tough and yet very pliable. The vulcanizers are equipped with automatic regulators, which insure uniform steam pressure, but as an additional precaution, gauges and thermometers are provided, and an inspector keeps constant watch over these vulcanizers.

An automobile tire is built on a steel core. Between the several layers of fabric are coatings of rubber. The fabric is so applied that, in service, each layer carries its full share of the strain throughout the tire.

When the tire leaves the builder's hands, it goes to the press room, where it is placed—



THE DEPARTMENT IN WHICH BOTH INNER TUBES AND OUTER ENDINGS ARE FINISHED



ONE OF THE DEVICES BY WHICH THE FABRIC IS DRIED BEFORE BEING USED

with the steel core, or center, still within it is a large two-piece mold. This mold is then placed between the platens of one of the steam presses and subjected to tons of hydraulic pressure. The platens of the presses are hollow, and are heated by steam. Inspectors are employed, whose sole business it is to see that a uniform heat is maintained, and that the tires are removed at exactly the proper moment.

In the tire work, selected Sea Island cotton fabric is used exclusively, woven specially to designs which have been adopted after years of experimenting and study of tire construction. Pieces are cut from every roll of fabric and subjected to a breaking test. A minimum strength of 250 pounds per square inch in each layer of fabric is required. Every roll of fabric, before being used, is passed slowly over a bent roll, to expel any slight dampness that may lurk in it. The fabric must be perfectly dry to work properly.

Selected, fine Para rubber is used in the inner tubes. The tubes are built on metal mandrels in such a way as to produce a seamless tube. The tubes are then wrapped in dampened cloths, placed in large vulcanizers, and cured in the open steam. When the tubes come from the vulcanizer, the ends are joined in a telescopic fashion, and vulcanized by a special process. Every tube is carefully tested under inflation, in a vat of water, before leaving the tube department.

Each tire bears a private mark, indicating every workman who has assisted in its production. A careful record is made, and the workmen receive cards reporting the class of work they have done during the week. No self-respecting workman wishes a bad record.



# GOSSIP OF THE GARAGES



NEW GARAGE OF THE CANARY AUTOMOBILE CO., OF CHICAGO

**Lowe Will Go**—George H. Lowe, Boston manager of the White company, is to tour to the St. Louis exposition with a White steamer.

**Borough Buys Knox**—The borough of Richmond, of Greater New York, has bought a two-cylinder Knox for the use of its commissioners of public works.

**Crest in Pittsburg**—The Keystone Automobile Co. has secured the agency for Greater Pittsburg for the Crest, manufactured at Cambridge, Mass.

**Another Hyphen**—The Richmond-Jarvis Co., of Grand Rapids, Mich., dealer in automobiles, has changed its name to the Richmond-Jarvis-Vandercar Co.

**After Cup Cars**—Hollman & Tangeman, of New York, say that they have cabled an order to purchase two of the Fiat international cup cars, which will be offered for sale in this country.

**Garage for Woonsocket**—The Woonsocket Electric Machine Power Co., at Woonsocket, R. I., is establishing a garage on Front street, near Central avenue. It will include charging room, and there will be room for twenty cars in the garage.

**Dumont Doing Well**—W. H. Furniss, who has established the agency for the Dumont in Boston, is meeting with considerable success. His car is an eye opener to the Bostonians, and judging from the way it is selling is bound to be popular.

**Cadillacs Coming Along**—William Metzger paid a flying visit last week to the New York and Philadelphia agencies of the Cadillac. "Everything is running like clockwork at the factory now," said he to a Motor Age man. "Last week we got out 242 cars and expect to keep this rate up right along now."

**Business Growing**—The Rhode Island Motor Car Company, which sells the Northern in Providence, R. I., has just completed a substantial addition to its garage on Richmond street by building a repair shop in the rear of the salesroom. The company is now doing all of the repair work that is needed for its customers.

**Expensive Heat**—An explosion in the automobile shop of De Conde Mfg. Co., of Boston, Mass., which took place last Thursday, caused nearly \$4,000 damage to the building and in the shop. The Allegheny Automobile Co., of Allegheny, Pa., sustained a loss of nearly \$8,000 last week, when the block in which it is located was destroyed by fire.

**In Boston, Too**—Charles E. Miller, of New York and Philadelphia, who has been appointed as the supply man of the Automobile Club of America, has established a large agency in Boston. The headquarters are situ-

ated on Columbus avenue, right in the heart of the automobile section, and contain everything imaginable that a tourist may desire.

**Author a Motorist**—Winston Churchill, the author, has just received the 18-24-horsepower Deauville ordered by him from the Standard Automobile Co. and drove it at once to his home in Boston. The car has side entrances and is fitted with a Victoria touring top. The Standard Automobile Co., by the way, has just received its first shipment of the 40-horsepower 1904 Deauvilles.

**Short on Machines**—There is a general complaint among Pittsburg dealers that they cannot get machines fast enough to fill orders. Blaker Brothers have four orders for high priced machines which will not reach them before August 1. The Keystone Automobile Co., which has already sold forty-five machines this season, is having trouble in getting Whites to fill its orders.

**Crestmobile in Gotham**—The Star Automobile Co., a corporation owned by the Star Rubber Co., has taken the Crestmobile agency for New York and opened a well appointed garage for their demonstration and sale at 144 West Thirty-ninth street. The officers of the new company are: E. D. Cadwell, president and general manager, and F. P. Johnston, secretary and treasurer. Frank G. Dwight, Jr., has been appointed sales manager.

**Changed All Around**—The board of directors of the National Capital Automobile Co. held a meeting in Washington last week. Schuyler S. Olds, Jr., vice-president of the company, and William Hitts, a director, have retired from the company. To fill the vacancies thus caused, E. C. Graham, president of the National Electric Supply Co., has been elected vice-president of the National Capital Automobile Co., and H. B. Mirick has been

placed upon its board of directors. With these changes the officers of the company are as follows: C. C. Stephenson, president; E. C. Graham, vice-president; H. H. Lyons, treasurer; Guy E. Mitchell, secretary; J. J. O'Connor, manager. There is some talk of changing the name of the corporation to the G. Life Co., but no definite action has been taken. The company, which is the Washington agent for the Peerless, Pierce, Franklin and Olds models, is gradually getting settled in its new garage on Fourteenth street.

**Results of the Win**—F. R. Gallaber, of the Richard National Agency, in speaking of the rush in Georges Richard-Brisser cars following Thery's victory in the international cup race, says he made nine sales in the week following the win. "If you want to know the exact figures," said he to a Motor Age man on Friday, "I can say that I have taken in an average of a thousand dollars each business hour since the news of Thery's success was received."

**In Handsome New Homes**—The Chicago branch of the Knox Automobile Co. moved from 321 Wabash avenue to 1249 Michigan avenue last week. It now occupies a two-story brick building, 25 by 112 feet, which, when entirely finished, will be one of the finest in the city. The main floor is used as a salesroom, office and repair shop, while the second floor is used as a storage room. This floor has a large display window in front and several cars have been placed there as well as in the street floor window. The Winton Motor Carriage Co.'s branch also moved into its new quarters at Thirteenth and Michigan avenue. Only the main floor could be occupied and it will be several weeks before the three-story building will be entirely completed. Then it will be almost with out a rival in the country, in location, light, space and finish. The building covers a space 100 by 130 feet and the Winton company will use about two-thirds of this, while A. C. Bauer will soon move into the northern section. The disposition of the upper floors has not been entirely settled.



WHY THE PACKARD 1,000-MILE NON-STOP RUN WAS NOT CONCLUDED

# FROM THE H INDS



**Parade at Duryeaville**—There will be an automobile parade in Reading, Pa., July 4.

**Automobiles and Ice Cream**—The Men's Club of the First church at Danbury, Conn., will hold an automobile party and ice cream festival this week.

**Number Growing**—Since last August thirty-eight new motor cars have been licensed in Meriden, Conn. Until then there were only eighteen cars owned by townspeople.

**Touring Westward**—J. M. Hartsford, a New York banker, started last week in his 35-horsepower Rochet-Schneider on a tour to his country place at Oconomowoc, Wis., by way of Buffalo.

**Two Municipal Wagons**—Two automobiles are owned by the city of Los Angeles, Cal. One is being used by Superintendent Malholand of the water department, and the other by City Engineer Stafford.

**Good Average**—Leon T. Shettler, of Los Angeles, Cal., established a new local record by driving his Winton touring car from Los Angeles to Redlands, 78 miles distant, in 3 hours 11 minutes actual riding time.

**Birdsall with Regas**—W. H. Birdsall, who was formerly general manager and mechanical engineer of the Buckmobile Co., of Utica, N. Y., has become mechanical engineer of the Regas Automobile Co., of Rochester, N. Y.

**Australian Record**—A new Australian record was recently established by R. A. Dunne, secretary of the Automobile Club of South Australia, who drove an Oldsmobile runabout from Adelaide to Melbourne, covering the 593 miles of roadway in 38 hours of actual riding.

**Is Not Bigoted**—President John Farson, of the Chicago Automobile Club, will soon have a fair number of automobile "thoroughbreds." Recently he purchased a 60-horsepower Apperson car and about a week ago he placed an order for a three-cylinder Thomas car.

**Five Kinds of Sweden**—The Automobile Club of Sweden has arranged an automobile endurance run which will take place early in July around Lake Mocher and Lake Hjelmär. The total distance will be about 1,380 miles. There will be five classes of vehicles: Trucks, heavy touring cars, light cars, voiturettes and pace racers.

RICHARD CARR'S TENDERPOOTS TRY AUTOMOBILING IN WHITE STEAMERS

**All Duryeas?** Up to June 17 there have been eighty automobiles registered in Reading, Pa.

**Westward, Ho!**—It is reported that the Holyoke Motor Works, of Springfield, Mass., will remove its plant to Grand Rapids, Mich.

**Want a Bonus**—At a recent meeting of members of the board of managers of the chamber of commerce of Fulton, N. Y., it was reported that the United Motor & Vehicle Co. would locate in the town provided \$35,000 is subscribed by residents of Fulton.

**Jay's Record**—Webb Jay, of Cleveland, O., established a record a few days ago by driving from Rochester, N. Y., to Cleveland in 14 hours 50 minutes. The distance between the two towns is about 275 miles and Webb is reported to have stopped 150 times in order to avoid frightening horses.

**Gould's Driver Arrested**—William W. Everett, driver for Frank J. Gould, was sentenced to 30 days in jail and to pay the costs of the proceedings by a court in Greenwich, Conn. He appealed the case. The contention was that Everett was driving the car at a rate of 37½ miles an hour.

**Fast Time in Sandy Country**—Charles W. Johnson and V. L. Nettleton drove last week from Coldwater, Mich., to Toledo, O., in a Rambler car, covering the 104 miles in 7½ hours of actual running time. For about 15 miles heavy sand was encountered and it was with some difficulty that the motorists could drive faster than about 10 miles an hour.

**Right In It**—Glenn D. Stuart, former manager of Barney Oldfield and Tom Cooper, recently purchased the two Mohawk racers which belonged to Carl G. Fisher and Earl Kiser. Two other racing cars are being completed for him and when he receives them he will organize a team, of which Austin Crooks, J. W. Levin and "Lady" Callahan will be members. Stuart contemplates entering the four machines in the Vanderbilt cup race.

**Ought to See Chicago**—A party of twenty-two automobiles carried by five cars was one of the principal topics of conversation in Quincy and Mendon, in Illinois, last week. It was the first time so many cars were seen together in that part of the state.

**Off for St. Louis**—Will H. Gelving and Guy Pryor, both of Wheeling, W. Va., expected to leave their home town for St. Louis, Mo., July 1 in an automobile. The distance they have to run amounts to about 600 miles and they expect to complete the journey within 48 hours of actual running time.

**The French Won**—In a recent touring competition for motor cycles arranged by the Cote d'Azur Sportive, a sporting journal of Nice, France, Lamberjack, on a Griffon machine, won first prize, Guillet on a Werner second, and Inghilbert on a Griffon third. Only French motor cycles took part in the contest and they were the make of five different manufacturers.

**Not the Spider**—In its story of the record climb of Mount Washington last week *Motors* A. errored in stating that the Stearns-Duryen, which Otto Neumann drove, was the "spider" racer used by him in his victorious climbs up Commonwealth avenue and Eagle Rock hills. A. G. Buteholder, who was the passenger on the climb, says that a stock car, rated at 7 horsepower and stripped of mud guards and top, was used.

**May Buy Searchmont Plant**—It was rumored in Trainer, Pa., last week that the Autocar Co., of Ardmore, Pa., would soon rent the plant of the late Fourrier-Searchmont Automobile Co., which has been closed for many months. Several officials of the Autocar Co. visited the factory and there were also several inquiries as to prices of cottages which are now empty and which are located near the once flourishing concern. It was said by some one who is familiar with affairs in Ardmore that the Autocar Co.'s plant is too small and that although the company is working



day and night it has not the facilities needed and seriously thinks of either renting or purchasing the buildings now occupied at Trainer.

**Nearly Up to Chicago.**—According to official figures there are 1,875 registered automobiles and motor cycles in the state of Connecticut. Seventy-four motor cars and nine motor bicycles are in Waterbury and thirty-five cars in Torrington.

**All the Varieties.**—For the 1,000-kilometer motor cycle endurance contest arranged by the Italian sporting paper *Gazzetta dello Sport*, fifty-four motor cyclists have entered. There are some from almost every country in Europe where these machines are manufactured.

**Consolidation Effectuated.**—The Oswego Steam Carriage Boiler Co. and the Howard Thermo-stat Co., of Oswego, have consolidated, the boiler company stockholders having purchased the capital stock of the other company. Men interested in the thermostat company will have stock in the boiler company.

**Another 999.**—The All-Around Washington Auto Co. has put in operation on the streets of Washington, D. C., a forty-passenger electric car made by the Vehiele Equipment Co. The car has been named 999 and presents a very attractive appearance when loaded. The company, which is the latest in the field, is doing excellent business.

**German Trade Growing.**—During the first 3 months of this year the export of motor cycles from Germany reached \$50,880 for 307 machines, as against \$24,400 for the 3 first months of 1903. On the other hand there is a corresponding increase in the importation of foreign motor cycles, their value for 3 months amounting to \$30,240, against \$14,400 for 3 months last year. Nearly \$20,000 worth of machines were sent from Belgium, which has more than doubled its exports to Germany in this particular line within 3 months.

**New Bus Company.**—A company is being organized with a capital of \$10,000 to operate an automobile bus line between Etna and Allison Park, a suburb 8 miles from Pittsburg, on the Pittsburg & Western railroad. It is proposed to run the buses through Glenshaw, Undercliffe, De Haven and Wiltmer. The line will be primarily for the use of the hundreds of mill men who are employed in Etna and Shinglersburg and who now have to go to their work in wagons. Among those interested in the project are W. Little, of Pittsburg, and H. C. Bellum, of Undercliffe.

**Always There.**—Through the kindness of Nelson S. Davis, of the Davis Automobile Co., of Providence, R. I., the Providence representative of MOTOR AGE was present at the inspection of the Knox factory in Springfield, Mass., on June 29. In a Knox touring car the trip from Providence to Springfield, a distance of over 90 miles, was made. Mr. Davis and the MOTOR AGE man being accompanied by Mrs. Davis and Miss Gertrude Davis. Of the large number of newspaper men present on that pleasant occasion the MOTOR AGE man was the only one present from Rhode Island.

**Want a New Valve?**—B. Morgan, of Rhinebeck, N. Y., has placed on the market an inlet valve of his own invention which possesses several features of convenience not in the ordinary valve. Mr. Morgan's valve was described several months ago in MOTOR AGE. In introducing it he has brought it out in numerous sizes, so that it may be applied without alteration to different makes of motors.

**Gare a Vous.**—“We are going to use the lasso in catching drivers of automobiles who are going through our streets at 25 to 50 miles an hour.” That's what a respectable citizen of Waukegan, Ill., is reported to have said to a friend, a motorist, who respects the law. “If those fellows won't behave and go at 6 miles an hour within the zone set forth by the ordinance, there is going to be something doing. They sent everybody, including dogs, chickens and horses, and they don't care a rap for the repeated threats that they must observe the law. Now we'll just see who is going to win out.” Gare a vous, motorists.

**This Shows.**—A feature of the automobile situation this year in Pittsburg is the better records that are being made. Last year the best record for the Serpentine course in Highland park boulevard was 1 minute 37 seconds, which was made by a 35-horsepower car. This year at least twenty-five cars have made the run in less time and many stock cars are making fully as good records as the specials used last year. The Serpentine course has an average grade of 8 per cent and abounds in sharp curves. The fact that better time is being made is taken by the dealers to mean that better machines are being put on the market and that the local motorists are becoming more expert in handling their machines.

**Made Long Run.**—The Chicago Motorcycle Club held a run last Sunday the feature of which was that there were two divisions. The first was given the name of “fast bunch” and was composed of those in a hurry; the second division was the “slow bunch,” which took its time. The run was to Starved Rock and back, by way of Berwyn, Riversdale, Lyons, Aurora and Ottawa, all told about 95 miles. The start was made at 5 in the morning and near Aurora a delegation of the motorcycle section of the Aurora A. C., headed by Alexander Levedahl, met the Chicago motorcyclists. By special permission the party was taken through the Aurora Automatic Machinery Co.'s plant, which took several hours. The roads were in good condition and no accidents of any kind happened.

**After Hoodlums.**—The Automobile Club of Pittsburg is determined to put a stop to speeding within the city limits if possible, and also to do away with missile throwing or tampering with cars when standing on the streets. An ordinance will be introduced at the next regular meeting of council regulating the speed of automobiles. Eight miles an hour will be named as the speed limit in the down town section and 12 miles an hour on the boulevards. There are many automobile owners in council and although they wish to have scorching stopped, it is thought that they may object to the limits fixed by the ordinance. The club lately decided to offer a reward of \$50 for the apprehension of any one throwing missiles at automobiles or carriages in the parks or on the boulevards. The club also offered a reward of \$100 for information against mobsters with

motor cars left in the streets. This has been one of the greatest difficulties the club has had to meet, as dozens of owners have had parts taken from their machines while standing or have returned to them to find the tires punctured or some of the machinery disarranged.

**Twenty-five Starters.**—The Rochet-Schneider cup race was run near Lyons, France, during the earlier part of June. The event was an endurance competition for touring cars over a distance of 210 miles. There were twenty-five starters, all of which finished the run. P. Martin in a 16-horsepower Murtal car won the cup with a total of 1,086 points, against 1,077 for L. Weitz, who drove a 20-horsepower Pilsen car. A 24-horsepower Berliet was third and a 24-horsepower de Dietrich fourth. In the two hill-climbing contests which were held during the run a 24-horsepower de Dietrich car driven by J. Dumont made the best record by climbing the 4½ miles of 15 per cent grade roads in 15:46½.

**Zig-Zagging Westward.**—F. E. Moskovics, of New York, who is one of the selling pillars of the Emil Grossman automobile supplies edifice, this week reached Chicago after a leisurely trip overland in a Clement-Bayard touring car. Mr. Moskovics left New York May 2, representing Continental tires, the full line of Grossman automobile appointments and the Bowman Automobile Co., importer of the Clement-Bayard. He will remain in Chicago about a week and will then tour Indiana and southern Illinois, intending to reach St. Louis the first week in August. In Chicago he is the guest of the Cadillac Co., of Illinois, western agent for the Clement. While not endeavoring to make fast time his sporting blood took possession of Moskovics leaving Detroit, and he made the run to Chicago at an average rate of 24½ miles an hour.

**Tire Stuff Cheap.**—Official advice is to the effect that the Brazilian government has reduced the export tax on rubber. Until recently the state of Amazonas has imposed an export tax on all rubber coming into its jurisdiction from up the Amazon river. Now the Brazilian government has made Acre a territory and all its revenues will be collected and used by the government. The export tax on rubber was reduced from 20 per cent of the declared value to 15 per cent, and the owner or purchaser of rubber grown outside of Amazonas is at liberty to ship his rubber from Manaus or Para, as he pleases. The amount of rubber affected by the new regulation is estimated at not less than 7,000 tons. Of this quantity, it is believed that 5,000 tons will come to Para. It is not believed that the reduction in value in the export tax will affect the invoice or foreign price of rubber; if anyone profits thereby, it will be the rubber collector, or first seller. He may, and probably will, receive nearly all of the difference in tax in an enhanced price for his rubber.



UNIVERSITY OF MICHIGAN



3 9015 05722 6501

